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REPORT

OF THE

DIRECTOR

OF

MEDICAL SERVICES

FOR THE YEAR

1938.

* * *

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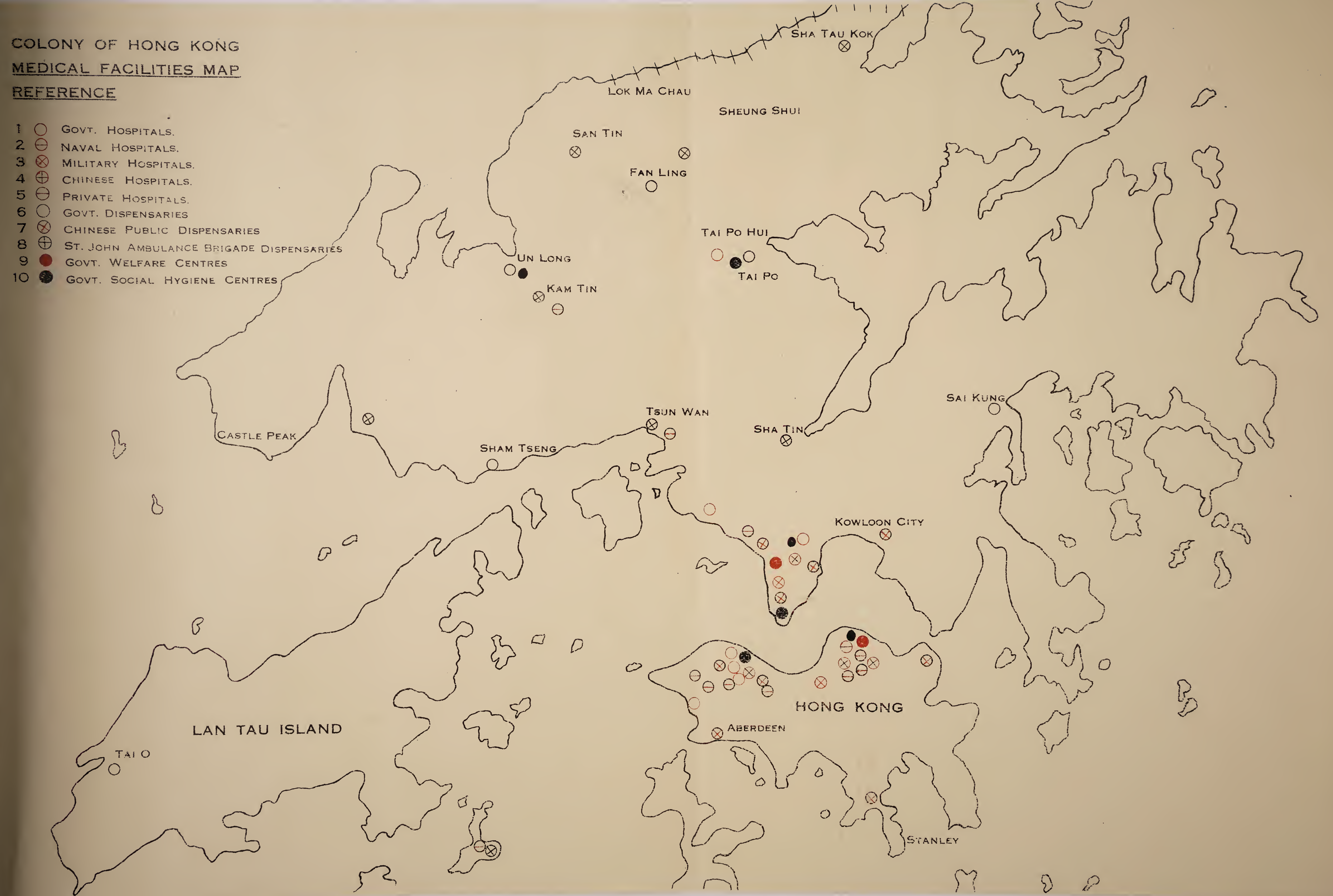
COLONY OF HONG KONG
MEDICAL FACILITIES MAP
REFERENCE
1 ○ GOVT. HOSPITALS.
2 ⊖ NAVAL HOSPITALS.
3 ⊗ MILITARY HOSPITALS.
4 ⊕ CHINESE HOSPITALS.
5 ⊖ PRIVATE HOSPITALS.
6 ○ GOVT. DISPENSARIES
7 ⊗ CHINESE PUBLIC DISPENSARIES
8 ⊕ ST. JOHN AMBULANCE BRIGADE DISPENSARIES
9 ● GOVT. WELFARE CENTRES
10 ● GOVT. SOCIAL HYGIENE CENTRES
SHA TAU KOK
LOK MA CHAU
SHEUNG SHUI
SAN TIN
FAN LING
TAI PO HUI
UN LONG
TAI PO
KAM TIN
SAI KUNG
TSUN WAN
SHA TIN
CASTLE PEAK
SHAM TSENG
KOWLOON CITY
HONG KONG
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ANNUAL MEDICAL REPORT FOR THE YEAR 1938.

I.—ADMINISTRATION.

A. (*a*) Staff—Medical, Health and Laboratory Divisions.

Appointments.

European.

Director of Medical Services: Dr. P. S. Selwyn-Clarke.

Government Consultant: Professor Gordon King.

Nursing Sisters: Miss M. A. Grant, Miss D. M. Baker, Miss K. E. Collie, Miss K. A. C. Steers, Miss E. S. R. Leslie, Miss P. M. Slack, Miss K. A. Milne, Miss M. West, Miss A. Holdway.

Secretary: Mr. J. H. Gelling.

Accountant: Mr. F. D. Angus.

Asiatic.

Medical Officers: Dr. Bee Hoat Tech, Dr. Ling Ke Dieh, Dr. Kong Sau Yui, Dr. (Miss) Cheng Hung Yue.

Medical Officers (Temporary): Dr. Tai Hon Sham, Dr. Tsan Wei Chean, Dr. H. H. Tai, Dr. H. F. Tai.

Promotions.

European.

Matron, Grade II: Miss F. A. Cranfield.

Retirements and Resignations.

Nursing Sisters: Miss O. Patchett, Miss N. K. Johnson, Miss H. Prescott, Miss A. C. Hill, Miss P. E. Kean, Miss D. C. Tall, Miss R. E. Low.

Asiatic.

Medical Officer: Dr. Cheung Shiu Fan.

(*b*) Health Division.

Appointment.

European.

Lady Medical Officer: Dr. (Mrs.) A. F. Stout.

Retirements and Resignations.

Lady Medical Officer: Dr. (Mrs.) G. R. Nash.

(*c*) Laboratory Division.

Appointment.

European.

Assistant Analyst: Mr. P. H. Symons.

B. Finance.

Due mainly to the increase in the number of patients admitted to hospitals and to the opening of the Lai Chi Kok Relief Hospital the total expenditure for 1938 exceeded the expenditure for 1937 by $389,210.48. The figures being $2,407,347.92 and $2,018,137.44 for the years 1938 and 1937 respectively. The ordinary (recurrent) expenditure in 1938 was $2,218,236.61 as compared with $1,866,911.97 in 1937. Special expenditure amounted to $189,111.31 in 1938 and $151,225.47 in 1937, but such items as cost of buildings, water supplies, etc., are not included.

The revenue earned by all divisions of the Medical Department during 1938 amounted to $431,034.17 as against $455,232.42 in 1937. The decrease was due to a large drop in the number of medical examinations of emigrants.

In Table 1 the figures include such items as water and drainage works, Urban Council cleansing services, etc.

Table I.

	$
Motor Ambulance Service	34,072.88
Police Department	288.00
Public Works Department	1,510,320.13
Sanitary (Urban Council) Department	1,050,283.55
Subsidies to Charities	449,678.22
Medical Department	2,407,347.92
Total	$5,451,990.70

The total revenue for the Colony from all sources in 1938 was $37,175,897.82; hence the expenditure on medical services formed 14.66 per centum of the general revenue as compared with 16.19 per centum in 1937.

C. (*a*) Ordinances affecting the Public Health.

The following is a list of Ordinances, Rules, Regulations, By-laws and Government Notifications affecting public health or medical matters which were enacted, made or published during 1938:—

1. Ordinances
    - (*a*) Vaccination Amendment Ordinance, 1938.
    - (*b*) Dentistry Amendment Ordinance, 1938.
    - (*c*) Dangerous Drugs Amendment Ordinance, 1938.
    - (*d*) Pharmacy and Poisons Amendment Ordinance, 1938.
2. Rules, Regulations and By-laws
    - (*a*) Public Health (Food). (New by-laws re reconstituted milk and reconstituted cream.)
    - (*b*) Public Health (Food). (Amendment to schedule to Ordinance).
    - (*c*) Pharmacy and Poisons. (Amendment of regulations).
    - (*d*) Pharmacy and Poisons. (Amendment of poisons list).
    - (*e*) Pharmacy and Poisons. (Amendment of fees).
    - (*f*) Emergency. (Amendment re prevention of cholera).
    - (*g*) Emergency. (Further amendment re cholera).
    - (*h*) Emergency. (Amendment re squatters and destitutes).
    - (*i*) Emergency. (Further amendment re squatters and destitutes).

II.—PUBLIC HEALTH.

(A) General Remarks.

(I) General Diseases.

The year 1938 was marked by the prevalence and persistence of infectious disease in the Colony. At the end of 1937 smallpox had begun to attain epidemic proportions and the number of cases notified increased rapidly in the early part of the year, reaching a maximum in March. The last case of this series was notified in July and by the end of that month the disease had died out.

2. Cholera recurred in Hong Kong in 1938, the first case being notified on the 25th of May. The disease was not as wide-spread as in 1937, thanks in part to the rigorous measures of control which were adopted, in part to the fact that the disease was expected and everything was in readiness to combat an outbreak.

3. These were the two major epidemic diseases occurring in the Colony in 1938, and there is no doubt that they lasted longer than they would have done in normal years owing to the overcrowding in all parts of the City of Victoria. The prolongation of the Sino-Japanese "Incident" has meant that the advent of poverty-stricken and starving refugees to Hong Kong has continued throughout the year. The extension of hostilities to the South of China in November led to a sudden rise in the number of refugees crossing the frontier and this attained a maximum during the month in question.

4. The measures of control taken were not adequate to ensure inspection of all those who crossed the frontier, and it is regrettable to have to record that smallpox was undoubtedly brought into the Colony during this November migration.

5. A sudden sharp rise in the number of cases of epidemic cerebro-spinal meningitis was also noted shortly after this inflow, and this was probably due to the fact that these people were brought into contact with carriers of the disease in the Colony and, being exhausted and ill-fed, succumbed to it only too readily.

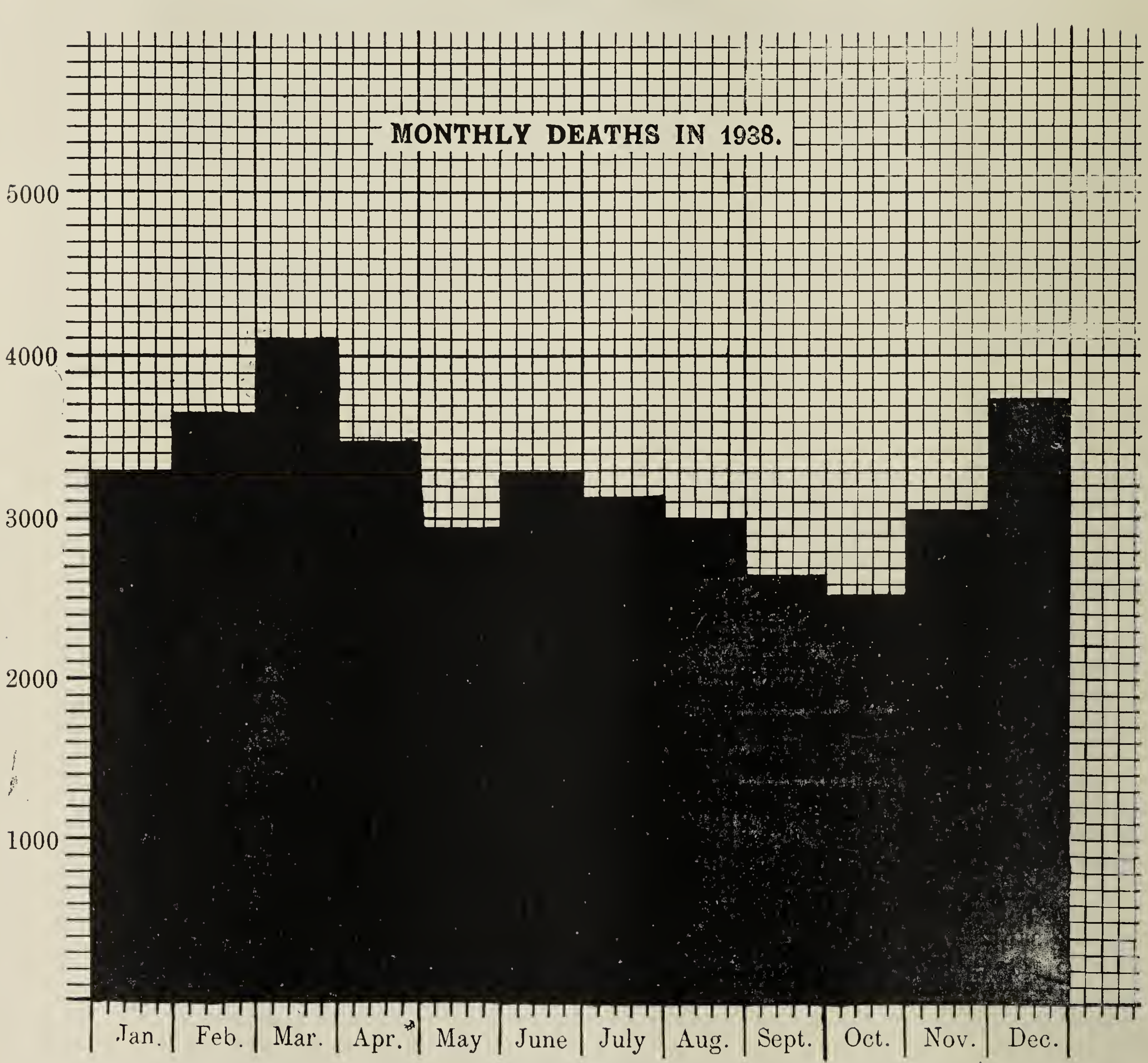
6. The congestion of the urban districts in Hong Kong continues unabated and the sanitary condition of most of the town is calculated to promote rather than to prevent the spread of infectious disease. This congestion has undoubtedly been the most important factor in keeping up the incidence of meningococcal meningitis. Even in the hottest months of the year cases of this disease have been recorded, although it is well-known that this disease has an increased preference for the winter and spring.

7. The numbers of deaths occurring each month during the year were as follows:—

Table II.

January	3,291
February	3,652
March	4,114
April	3,478
May	2,961
June	3,292
July	3,110
August	2,983
September	2,640
October	2,517
November	3,047
December	3,733
TOTAL DEATHS	38,819

8. These figures may be represented graphically as follows, and these histograms show that the two peaks were attained in March and December.



(II) Communicable diseases.

(a) Mosquito or insect-borne diseases.

9. Malaria, thanks to the untiring zeal and indefatigable activity of the Malaria Bureau, is no longer to be regarded as one of the major killing diseases in Hong Kong. Control is still essential as the infection rate remains high in rural areas which cannot be freed from breeding places for economic reasons.

10. The number of deaths recorded from malaria in 1938 is 733; this number includes two deaths from malaria among the Forces of the Crown. No case of blackwater fever was recorded.

11. Nine cases of filariasis and five of dengue were reported during the year. It is clear, therefore, that the incidence of mosquito-borne disease in Hong Kong is not excessively high. The whole subject is dealt with in greater detail in the Report of Malaria Bureau in "Section IX, Scientific."

(b) Infectious Diseases.

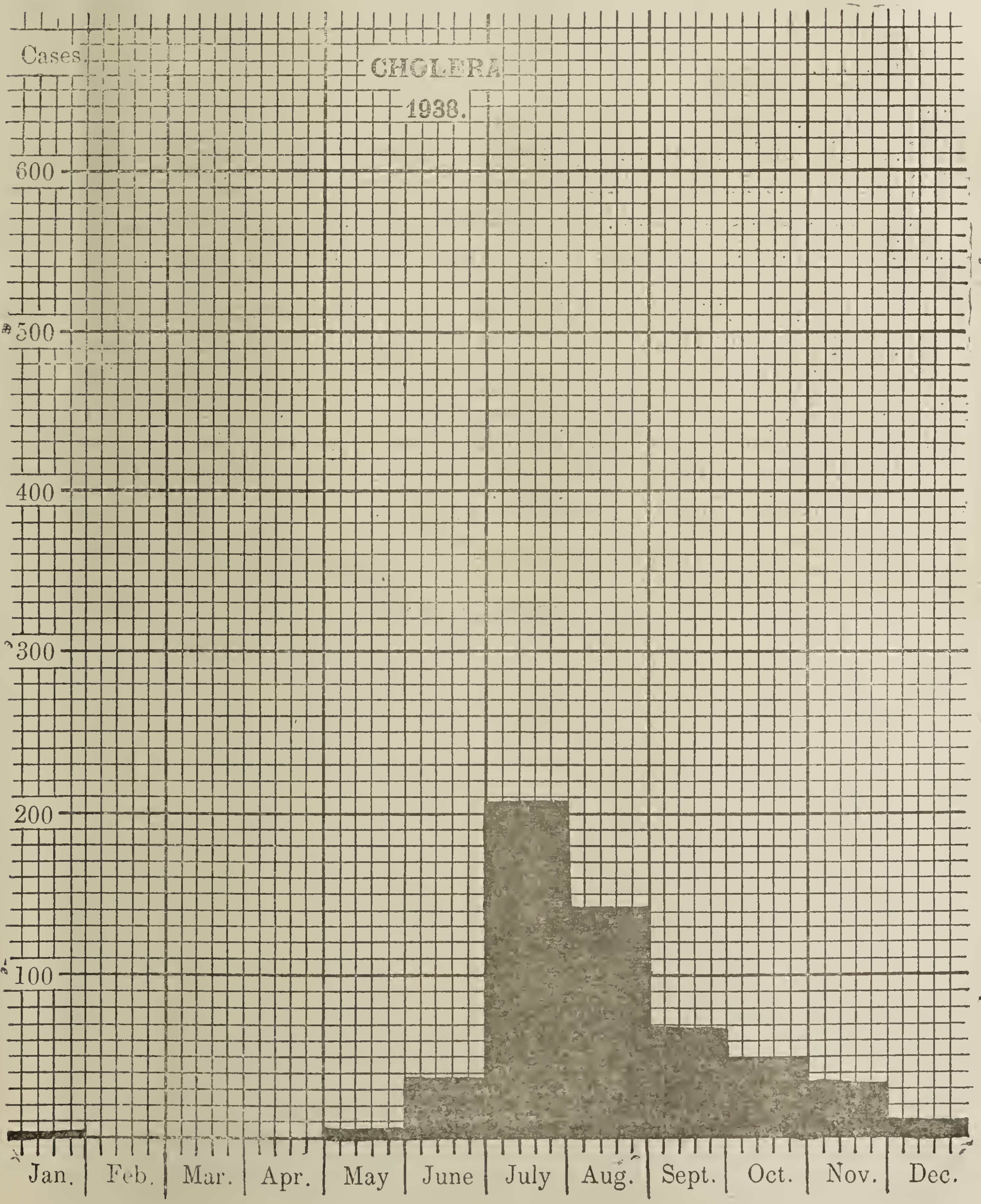
(i) Plague.

12. No case of plague was recorded in Hong Kong in 1938, despite the assertion of the British Medical Journal during the year to the contrary. The disease has been epidemic during the year in the following districts in China:—Kwangtung, Kwangsi, Hainan Island and some parts of the North.

13. The infection appears to have been absent from the Colony since 1929. Daily examinations of rats are made in both the Hong Kong and Kowloon mortuaries, and spleen smears are taken from a certain number of the animals each morning. This is a precautionary measure of value, as the possibility of a reappearance of plague in the Colony is by no means remote.

(ii) Cholera.

14. Cholera was widespread all over the Far East during 1938. Although anti-cholera inoculations had been given free during the early part of the year to all members of the public who wished to avail themselves of this measure, and despite active propaganda designed to educate the public in methods of self-protection against the disease, the disease reappeared in May.



15. Hong Kong was prepared for an epidemic. After its first appearance in May, the disease spread rapidly in June and attained its peak during the third week in July. From July onwards the epidemic declined; although, in contradistinction to 1937, sporadic cases of the disease occurred throughout December. In all, 547 cases of the disease were recorded with 363 deaths as compared with 1,401 cases and 776 deaths in the previous year.

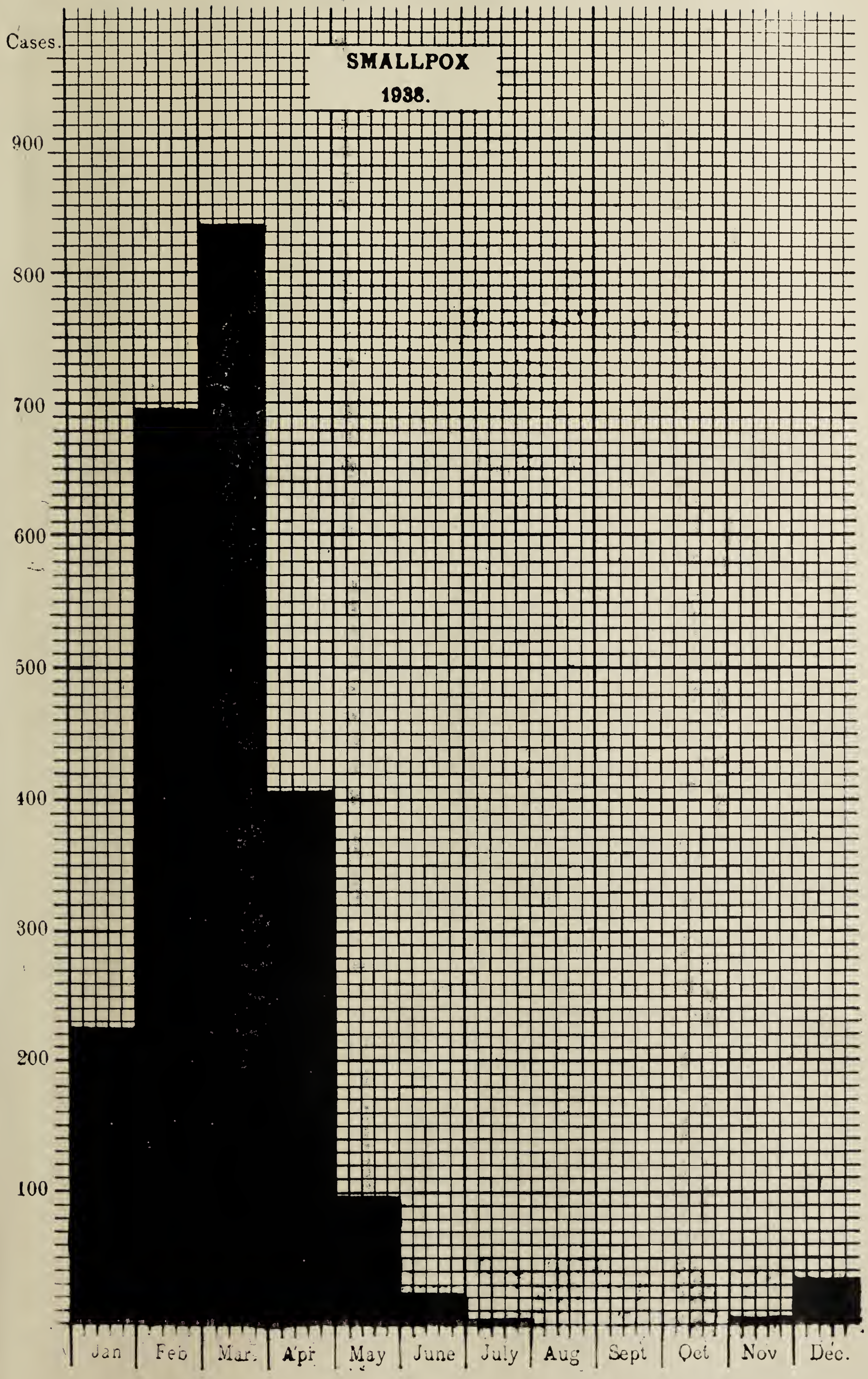
16. The outbreak was aggravated by the steady stream of refugees into the Colony and by the overcrowded conditions existing in Hong Kong. Twenty-one cases were imported from various districts of China, and it was found necessary to impose quarantine measures against ships coming from Canton and Macao. Many more males than females were affected by the disease, and it was striking to note how relatively uncommon the disease was in children under ten years of age. Further details of the outbreaks from the clinical and bacteriological standpoint will be found in "Section III, Hygiene and Sanitation" and in Appendix IV.

(iii) Smallpox.

17. The outbreak of smallpox which began in Hong Kong in November, 1937, reached its fastigium in March, 1938. 236 cases and 192 deaths were recorded in the week ending the 19th of March. It was obvious that the epidemic was over by June and only five cases were reported in July.

18. Compulsory vaccination for all was introduced soon after the March peak and all ships coming from Canton were quarantined for the first time in the history of the Colony. Free vaccination centres were opened at hospitals, dispensaries and points of vantage throughout the Colony, the number of public vaccinators was increased and a vigorous anti-smallpox campaign was instituted. An officer was put in charge of this campaign, which was undoubtedly of great value in preventing further spread of the disease.

(See page 7.)


SMALLPOX
1938.
Cases.
900
800
700
600
500
400
300
200
100
Jan
Feb
Mar.
Apr
May
June
July
Aug
Sept
Oct
Nov
Dec.

19. The vaccine lymph used in the vaccination centres was prepared locally at the Government Bacteriological Institute. It proved uniformly potent and effective.

20. Immediate approval was given by Government for the augmentation of the accommodation at the rather inadequate Infectious Diseases Hospital in April by the building of three new huts each capable of holding fifteen-twenty patients. These huts enabled the use of marquees for the surplus patients to be discontinued.

21. The epidemic was the most virulent in living memory, and killed 1,833 people. The total number of cases recorded in the year was 2,327, of whom only 834 reached hospital. The mortality rate based on inclusive totals was 78 per centum. The hospital figures are given in Appendix III, where a more detailed account of the outbreak from the clinical standpoint will be found. An interesting sidelight is thrown on the popular reasons advanced in regard to the cause of this outbreak in Appendix IIIA. It is worthy of note that the majority of the deaths occurred in children of five years or under, some 1,388 in this age group.

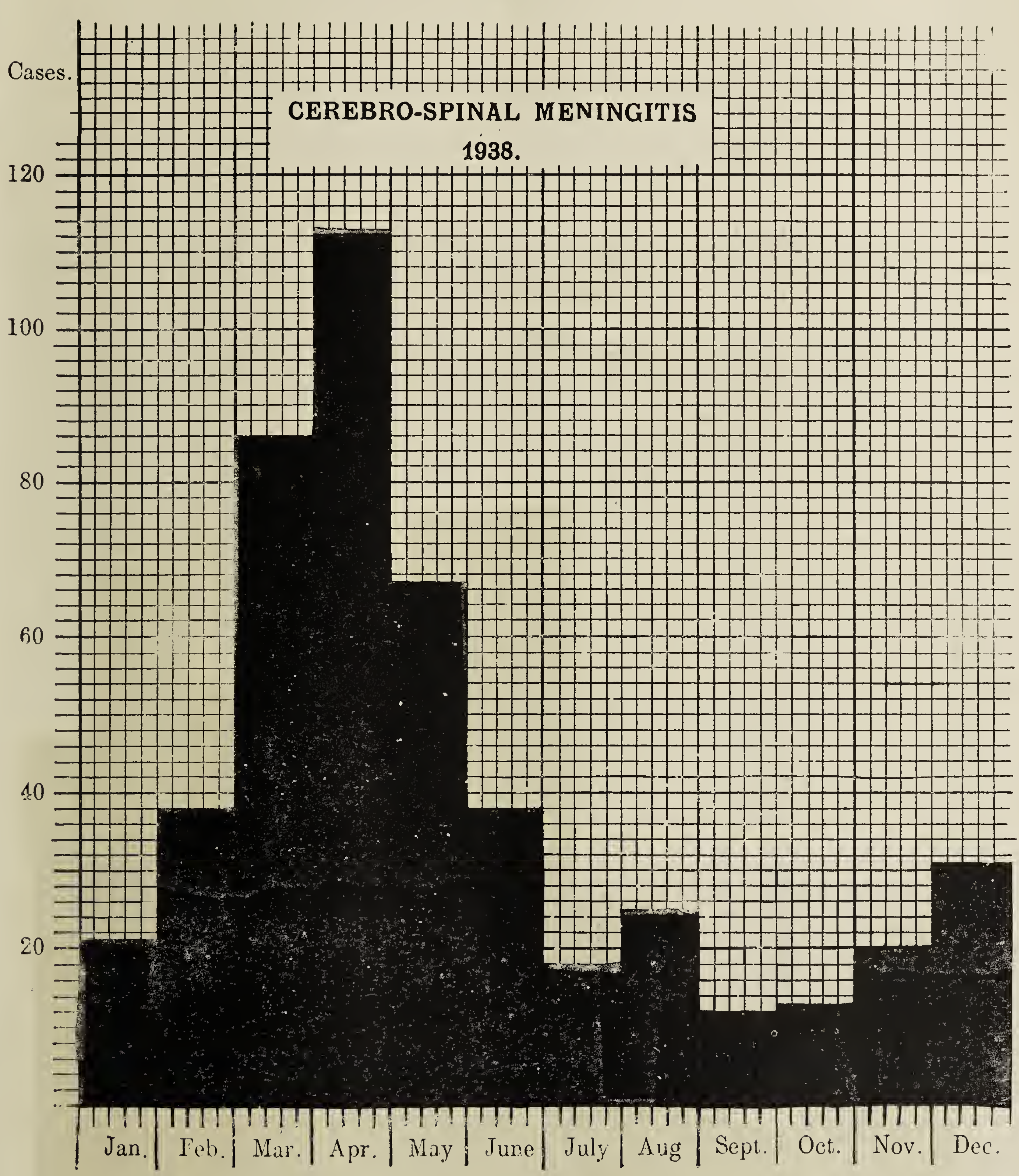
(iv) Typhus.

22. Typhus occurred in epidemic form in several parts of northern China during the spring months, but Hong Kong was fortunate in having only two cases during the year. One was a naval rating who appeared to have contracted his infection in Shanghai, twelve days before arriving in Hong Kong; the other was a young male refugee who developed the disease three days after arriving from Shanghai. The latter case was sent into the Infectious Diseases Hospital as a case of smallpox. Both cases occurred in May and the diagnosis in each was established by the Weil Felix reaction. Both men recovered.

(v) Cerebro-spinal meningitis.

23. Cases occurred sporadically throughout the year. Out of a total of 483, 113 were notified in April. February, March and April were the months of greatest prevalence. The mortality was 46 per centum, 223 out of the 483 cases having died.

(See page 9.)



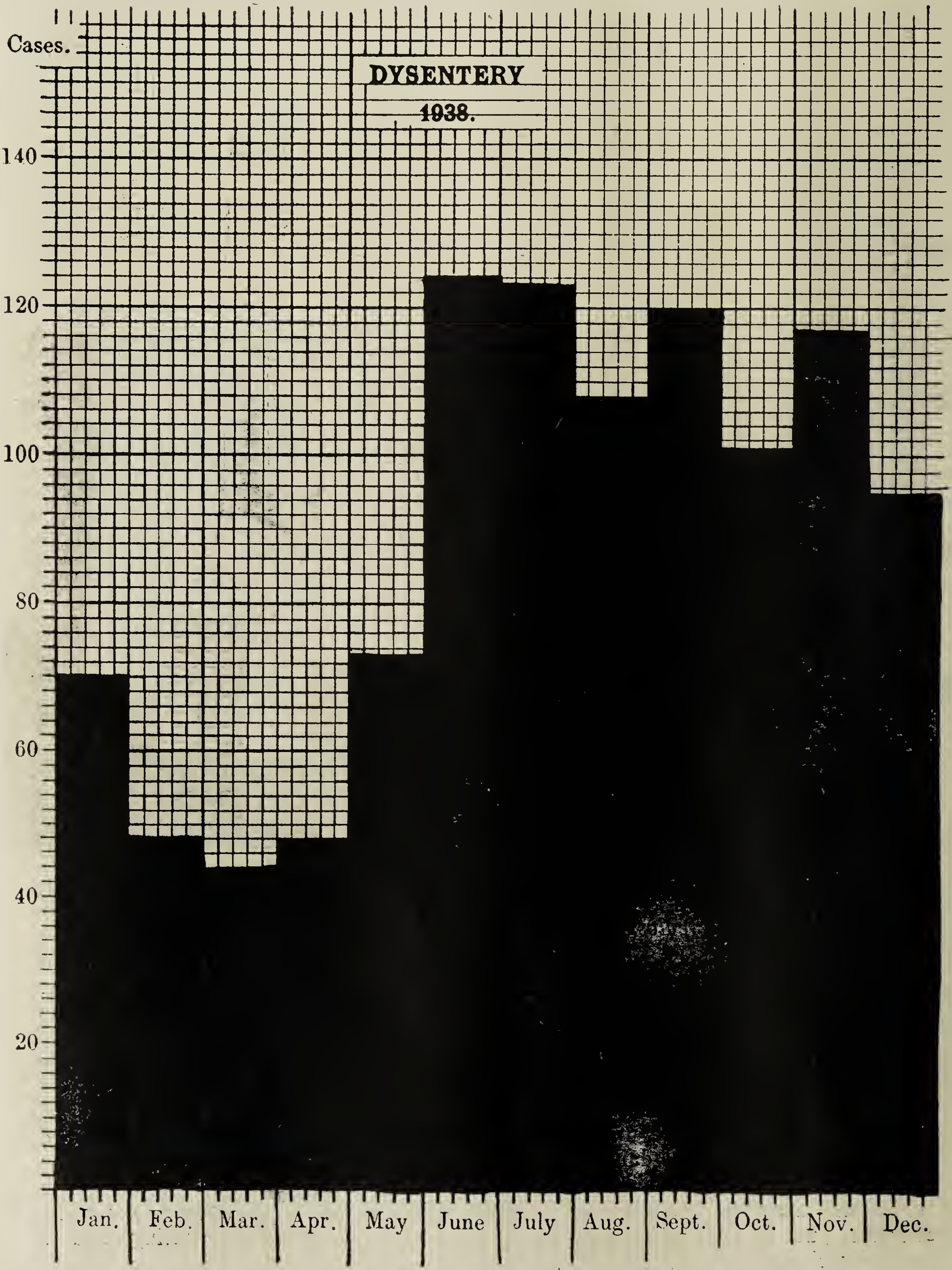
(vi) Pulmonary tuberculosis.

24. Approximately one out of eight of all deaths occurring in Hong Kong in 1938 was due to pulmonary tuberculosis, which killed 4,920 people in the year. It is probable that at least five people suffer from the disease for everyone who dies of it, and the opportunities afforded for its spread by overcrowding are legion. The average poorer class Chinese tenement to-day houses from thirty to as many as sixty human-beings per floor as compared with between fifteen and seventeen before the "Incident". Many of these people are out of work, most of those who have work are underpaid and all live on an inadequate and ill-balanced diet. They are exposed daily to mass infection with tuberculosis because of the universal and disagreeable habit of spitting; they are ignorant of the ways in which the disease is spread; their hygienic standards are of the lowest, and it is, therefore, not to be wondered at that tuberculosis heads the list of killing diseases in Hong Kong.

25. Tuberculosis was not notifiable in 1938 and it was quite impossible to send into hospital any but a small proportion of infective cases.

(vii) Dysentery.

26. Dysentery was rife throughout the year and accounted for 338 deaths out of a total of 1,071 cases. There was no significant rise in the number of cases before the cholera epidemic began. The maximum number of cases was reported in June, 124, July coming a close second with one less.

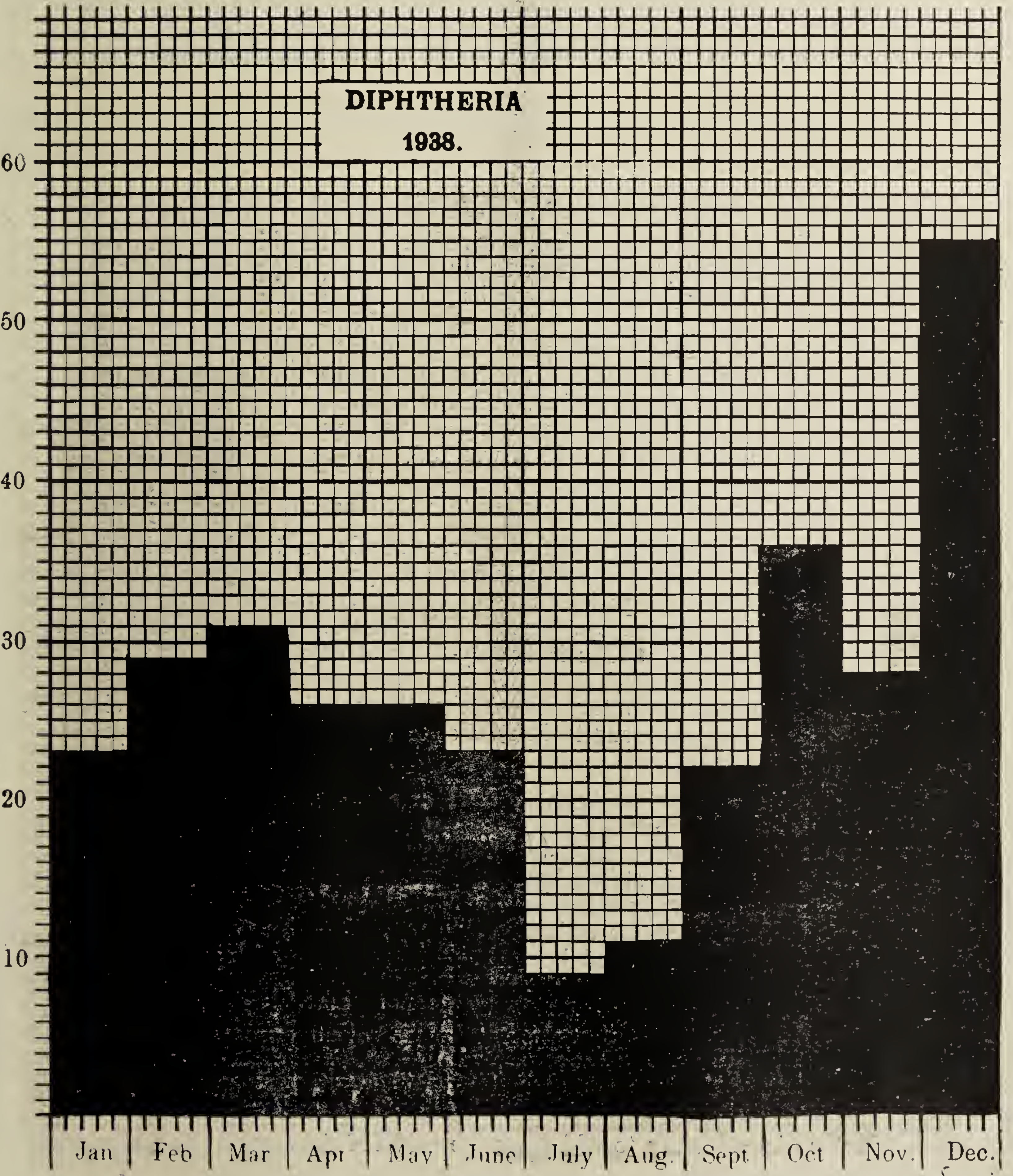


(viii) Typhoid fever.

27. Numerous cases of this disease were reported during the autumn months. The disease was in the majority of cases due to Bacterium typhosum, and killed 187 people out of a total of 539 cases. The months of maximum incidence were June and July, with seventy-nine and ninety-two cases respectively.

(ix) Diphtheria.

28. Diphtheria did not become epidemic in 1938. 319 cases were notified of which 147 died. The season of maximum incidence was from October to April. Of the 147 fatal cases, 132 were under the age of ten.



(x) Scarlet fever.

29. Four cases of scarlet fever were notified during the year in Hong Kong, one in March, one in April and two in December. The disease is, and remains, a rarity in the Colony.

(xi) Leprosy.

30. It is difficult to obtain accurate information about the incidence of leprosy in Hong Kong and the New Territories. A personal visit by the writer to St. Joseph's Leper Settlement at Sheklung in Kwangtung in the early part of the year resulted in an arrangement being made with Government approval by which non-British born lepers could be transferred to Sheklung. Government undertook to give financial aid to the Mission concerned in return for which the latter agreed to build accommodation for four hundred lepers. Later in the year, Government acquired the buildings in which the lepers are now housed in Hong Kong and the plot of land on which they stand.

31. New legislation enacted at the same time gave the medical officer in charge of the lepers a greater measure of control over them, an important step, as the lepers up to that time had been an unruly and turbulent body.

32. The buildings in which they live were wire-fenced in December and a continuous police patrol of the leprosarium and its precincts was begun when the fence was finished. Government also ruled in December that convicted lepers should be confined in a special portion of the Hong Kong Prison at Stanley.

33. The daily average of lepers cared for during the year was eighty-nine. Seventy-two were sent to Sheklung in July, but since the extension of hostilities to the south of China, some of these have drifted back to Hong Kong.

34. A great increase took place in the number of lepers admitted during the last three months of 1938. This has undoubtedly been due in part to the Japanese invasion of South China. This increase is shown by the fact that, whereas the number of lepers remaining in the leprosarium at the end of 1937 was sixty-two, at the end of 1938 it was 133.

(c) Helminthic Diseases.

35. These diseases do not figure prominently in the hospital returns, and it is probable that they are much more wide-spread than these figures indicate. For example, in the out-patient returns of the University Clinic at the Queen Mary Hospital infestations are recorded as follows:—ankylostomiasis thirty-five, ascariasis twenty-seven, trichuris twenty-five and oxyuris vermicularis sixteen.

36. The in-patient returns from the Chinese hospitals show clearly that ascariasis is the commonest infestation, but the figures for in-patients are negligible.

(B) Vital Statistics.

(1) Population.

37. Hong Kong is still a free port, and as it is so close to the mainland no effective control of immigration or emigration exists. This being so, it is impossible to give an accurate estimate of the population of the Colony. The 1938 mid-year population estimated by extrapolation from the last two census results is 1,028,619. The excess of immigrants coming in by sea and railway over emigrants during 1938 was more than 300,000, and when it is remembered that this figure takes no account of those entering the Colony by sampan, junk or across the land frontier it is easy to realise that the normal population of Hong Kong has been increased by between 400,000 and 500,000 during the year.

38. It is necessary to add a further 100,000 in respect of the surplus immigrants over emigrants in 1937 resulting from the arrival of refugees from Shanghai and North China.

39. Most of these people have been accommodated in the urban districts of the Colony, but at the height of the "invasion" in November many thousands were crowded into the towns and villages of the New Territories. Though the

advent of refugees has been continuous throughout the year, there were three peaks, the first occurring after the systematic air raids on Canton began in May, the second after the Japanese landed at Bias Bay in October, and the third and greatest after the Japanese "mopping up" operations along the Hong Kong frontier at the end of November. The measures taken to deal with the refugees are described in Appendix II.

40. The fall of Canton, while it checked the stream of immigrants arriving by river, did not entirely stop it, for refugees were still able to reach Hong Kong by Shekki and Macao. Regulations formulated on a property basis—only those possessing $20 being allowed to enter the Colony—failed to check the inflow. The figures given in the following table do not include refugees now living in Hong Kong and the New Territories.

41. The distribution of the population in various parts of the Colony (exclusive of refugees of all classes) is estimated as follows:—

Table III.

	Hong Kong	Kowloon	New Territories	Maritime	Totals
Non-Chinese	9,871	11,361	492	1,372	23,096
Chinese	444,138	352,849	108,536	100,000	1,005,523
Totals	454,009	364,210	109,028	101.372	1,028,619

42. Under the Births and Deaths Registration Ordinance, No. 21 of 1934, registration is compulsory. The director of medical services is registrar-general of births and deaths, and the necessary data are obtained through eleven register offices in the Island of Hong Kong, seven in Kowloon and eleven in the New Territories. Much help is given by the Police Department and the Chinese Dispensaries in seeing that births are registered; but unfortunately registration is still carried out imperfectly owing mainly to the Chinese custom of not registering children until they are in the second year of life.

43. Registered births in 1938 showed an increase from 32,303 (692 non-Chinese) in 1937 to 35,893. The crude uncorrected birth-rate for 1938 was 34.9 per thousand of the mid-year population, as compared with a crude rate of 32.1 for 1937.

44. Among the civilian population 38,818 deaths were registered in 1938, an increase of 4,183 over the 1937 figure. In addition to this, twenty-nine deaths were recorded in the Forces of the Crown during the year, an increase of eighteen over the 1937 figure. The crude uncorrected death-rate for the civilian population is estimated at 37.7 per 1,000 living, the figure for 1937 being 34.4. These increases in the actual number of deaths and the death-rates reflect the general deterioration in the health of the community, a deterioration thought to be brought about by overcrowding, lack of housing and insufficient food. Still-births numbered 1,075 in 1938, 913 in 1937.

45. 11,620 Chinese infants under one year of age died in 1937, 12,001 in 1938, the infant mortality rates for the two years being 376 and 343 respectively. Post-registered births were subtracted from the total Chinese births before this figure was obtained.

(2) Non-Chinese Registration.

46. 558 births were registered in this section in 1938 (270 male and 288 female). This is a decrease of 134 on the 1937 figure. The crude birth-rate is estimated at 24.2 per 1,000 living in 1938 as compared with 30.6 in 1937. There were 244 non-Chinese deaths (excluding eleven deaths in the Forces of the Crown) in 1937, giving a death-rate of 11 per 1,000 living, whereas in 1938 the corresponding figures were 197 (excluding twenty-nine deaths in the Crown Forces) giving a death-rate of 8.5.

47. The deterioration of general health in the Chinese inhabitants, which is clearly demonstrated by these figures, has not been accompanied by a corresponding falling off in the health of the non-Chinese people living in Hong Kong. This is to be accounted for by the immeasurable higher standard of living of the non-Chinese elements of the population. In the year under review, there were ten still-births in the non-Chinese population.

48. Twenty-three non-Chinese infants under one year of age died in 1938, as compared with thirty in 1937. This gives an infant mortality rate of 42 for non-Chinese infants, as compared with 46 for the year 1937.

49. Comment on the respective infant mortality rates of the Chinese and non-Chinese communities is needless; the figures cry aloud.

50. Sick and invaliding rates are still unobtainable in the case of the general non-Asiatic population, but steps were taken in 1938 with the permission of Government which may result in useful data being collected in 1939 regarding morbidity rates in European officials.

(3) European Officials.

Table IV furnishes data regarding the health of European officials during 1938 and affords means of comparison with the state of health of this section of the community in the preceding two years.

Table IV.

	1936	1937	1938
Total number of officials resident ...	942	940	1,042
Average number resident	930	918	833
Total number on sick list	453	453	435
Total number of days on sick list ...	7,144	6,134	7,367
Average daily number on sick list ...	20	17	20
Percentage of sick to average number resident	49%	49%	52%
Average number of days on sick list for each patient	16	14	17
Average sick time (in days) to each resident	8	7	7
Total number invalided	10	12	5
Percentage of invalidings to total residents	1.06%	1.28%	0.48%
Total deaths	7	3	5
Percentage of deaths to total residents	0.74%	0.32%	0.48%
Percentage of deaths to total average number resident	0.75%	0.33%	0.60%

III.—HYGIENE AND SANITATION.

(A) General Review of Work done and Progress made.

(I) Preventive Measures.

(i) Mosquito and insect-borne diseases.

(a) Malaria.

51. Some reference has already been made to the work carried out by the Malaria Bureau which was established in 1930. As a result of its activities malaria is now limited to the outskirts of towns and the country districts. However, there are still many parts of Victoria where permanent drainage works have not yet been put in and it would be premature to allow any relaxation of anti-malarial activities at present. The scope of the work done by the Bureau during 1938 may be seen in the Malariologist's Report for the year, "Section IX, Scientific."

52. The total number of deaths recorded from malaria during the year was 733, an increase of thirty four on the 1937 figure. When it is recalled that tens of thousands of refugees arrived from malarious districts during the year, there is some cause for satisfaction that the increase of deaths was relatively insignificant. Difficulty is still being experienced in control of breeding on land under wet cultivation.

53. It is, of course, impossible to abolish paddy-fields, but as the area under wet cultivation is far too extensive to be treated with non-oily larvicides, other measures such as screening and netting have to take their place.

(b) Yellow fever.

54. No case of yellow fever has yet been authenticated in the Eastern hemisphere. Rigorous measures of surveillance and control have been imposed on aircraft travelling from infected territories to the East, and thus far they appear to have been successful.

(c) Filariasis.

55. The incidence of filariasis in the Colony is negligible. Other diseases conveyed by insect vectors are dealt with under separate heads.

(ii) Epidemic diseases.

(a) Plague.

56. Rats are trapped systematically throughout the year. 189,502 were trapped during 1938, 21,893 of these being alive. A portion of each day's catch is taken to the two public mortuaries. The rats are examined after death and spleen smears are made each day from a certain number of them. P. pestis was not demonstrated in these smears, nor have any rats been noted with signs of plague during the year under review. In the absence of human cases it is, therefore, legitimate to affirm that P. pestis does not exist in the Colony at present.

57. Periodical cleansing of houses is carried out and mild anti-rat propaganda is given to their inmates. 1,289 rat holes were blocked up during the year as compared with 1,313 in 1937. It is questionable whether any or all of these measures have a marked influence on the rat population of Hong Kong.

58. The measures taken to prevent the introduction of plague from shipping are described in the section dealing with port health work and administration.

(b) Cholera.

59. A brief description of the 1938 outbreak of cholera has already been given in this Report and further clinical details are given in Appendix IV. The measures of control taken included the following:—

(i) Isolation of the sick,
(ii) Mass inoculation,
(iii) Press propaganda,
(iv) Restrictive legislation,
(v) Quarantine of shipping,
(vi) Inspection of trains,
(vii) Disinfection of infected houses.

60. With the permission of Government the upper blocks of the former prison at Lai Chi Kok were opened as a cholera hospital capable of holding at a maximum 200 patients. The unit was self-contained, save for its supply of distilled water, and proved of great use.

61. Inoculations were made at hospitals, dispensaries and special posts established for the purpose. The total number carried out was 940,000. Valuable assistance was given by the St. John Ambulance Association, and the Medical Faculty of the University of Hong Kong while the epidemic was at its height.

62. Propaganda was begun before the first cases appeared in May and was carried on by the Press, posters and wireless broadcasts. The public was warned how to avoid infection, where to obtain free inoculation against cholera, and what to do with a suspected case of the disease. The value of inoculation was stressed to the limits of truthfulness and a campaign of mass inoculation was opened.

63. Legislation was introduced prohibiting the sale of foods and drinks likely to convey infection. An attempt was also made to obtain compulsory and efficient pasteurisation of all fresh milk, this measure to take effect from the beginning of 1939. Measures were also taken providing for the chlorination of all pipe-borne water in the Colony and the covering in of one exposed service reservoir.

64. Arrival of river steamers by night was prohibited, and all vessels arriving from Canton and Macao were examined under Police guard at the wharves. The port health authorities undertook the cleansing of decks and lavatories after the disembarkation of passengers. All passengers coming in by train were also inspected on arrival.

65. The sanitary inspectorate redoubled its vigilance and disinfected all houses in which cases of the disease had occurred.

66. While it must be admitted that the inspections of passengers arriving by ship and train were, and in the circumstances could not but be, cursory, a dispassionate survey of the available data leaves the impression that the measures just described did, in fact, exercise a marked influence in controlling the spread of the epidemic in 1938.

67. There were probably at least 300,000 more people at risk in the Colony than in 1937, yet the actual number of cases recorded in 1938 was only just over a third of the 1937 total.

68. It is very difficult to obtain accurate figures to show the efficacy, if any, of inoculation in mitigating the severity of the disease. In a group of 106 patients who stated definitely that they had not been inoculated, thirty-nine died

and sixty-seven recovered. In a group of twenty-six patients who stated that they had been inoculated in 1938 only three died. The respective mortality rates in these two groups were, therefore, 36.7 per centum and 11.5 per centum. The series are too small for importance to be attached to them, but nevertheless the figures are both significant and suggestive.

(c) Smallpox.

69. The disastrous epidemic of smallpox which raged throughout the Colony at the beginning of 1938 has already been described in outline.

70. The preventive measures taken against the disease included vaccination throughout the Colony. During the year, 1,035,448 vaccinations were performed. The Legislative Council gave its approval to an amendment of the Vaccination Ordinance making vaccination compulsory for all classes on the 22nd of April, 1938. Free vaccination centres were opened in hospitals, dispensaries, and at other convenient points. With Government approval, twenty-four temporary officers were added to the quota of twelve public vaccinators. The St. John Ambulance Association lived nobly up to its past record and gave great help in carrying out this large number of vaccinations.

71. A certain amount of vaccine lymph was imported by Government as a precautionary measure, but most of the lymph used was prepared at the Government Bacteriological Institute which, as usual, rose to the occasion. The resources of the Institute as regards animal accommodation were taxed to the uttermost, but over fifty litres of lymph were prepared during the year.

72. Cases of the disease were isolated at the Infectious Diseases Hospital at Kennedy Town. Reference has already been made to the increase in accommodation effected at this institution. The total number of cases recorded in 1938 was 2,327 of whom 1,833 died, a mortality rate of 79 per centum.

73. The epidemic was waning by the end of May and finally died out in July, in which month only five cases were reported. Thirty-seven cases were reported during November and December, mostly in refugee children.

74. The outbreak was the most virulent the Colony has ever known, and the high number of toxic cases—almost 10 per centum of the number admitted to hospital—gives an index of the virulence of the virus.

75. The deplorable Chinese custom of waiting till the second year of a child's life to have it vaccinated means that whenever smallpox breaks out in the Colony there is a holocaust of infants. In 1938, of those who perished 1,388 were babies and children of five years and under.

76. It is gratifying to be able to record that during the year under review steps were taken which will in time bring the sanitary inspectorate directly under the control of the medical officers of health—an absolutely essential measure if effective use is ever to be made of this body of potentially very valuable public servants.

(iii) Other Diseases.

(a) Leprosy.

77. Two important steps were taken regarding leprosy during the year. Firstly, arrangements were made with the approval of Government to give financial aid to the Catholic Mission at Sheklung, in Chinese territory, which in its turn undertook to build accommodation for 200 lepers, the number to be increased later to 400. The lepers will be maintained at Sheklung at the expense of the Hong Kong Government. Secondly, Government acquired the former Tung Wah Smallpox Hospital and the plot of land on which it stands. It is hoped that this step will enable some form of discipline to be imposed on the lepers. It was also arranged late in the year that convicted lepers should serve their term of imprisonment in a special building to be erected at some future date in the precincts of Hong Kong Prison.

78. It is impossible to make any statements about the incidence of leprosy among the inhabitants of Hong Kong because no figures worthy of attention have ever been obtained on the subject. It is quite certain that a high percentage of the lepers now in the settlement have come to Hong Kong after contracting the disease elsewhere.

Table V.

Discharged	20
Transferred to Sheklung Leper Settlement, Kwangtung, China	72
Discharged at own request	91
Died	17
Remaining at end of 1938	133
	333

(b) *Tuberculosis.*

79. It is regrettable to have to record that infectious cases of pulmonary tuberculosis still remain in close contact with their fellow beings, and that the majority of them are only diagnosed at autopsy. The provision of adequate hospital accommodation for all persons suffering from "open" tuberculosis is urgently needed, but there seems little hope of this need being fulfilled at the present time.

80. Attempts are being made to improve the housing conditions of the poorest Chinese, but it seems unlikely that these efforts will be attended with success until the population of the Colony returns to its pre-war level, extensive housing operations have been taken and restrictive measures have been introduced on immigration.

81. A Nutrition Research Committee has been appointed to enquire into various aspects of malnutrition and it is hoped that this body may be able to point the way to an amelioration of the problem.

82. Legislation to bring about the compulsory pasteurisation of milk was introduced in 1938, and the possibility of making spitting in public places illegal is also being considered.

(iv) Helminthic diseases.

83. Prophylaxis against helminthic diseases is effected by the control of nightsoil and refuse, the methods employed being described in the relevant section. The inspection of meat and foodstuffs is carried out regularly and a moderately successful war is waged on flies in the urban areas on the Island. Markets and slaughter houses in the urban areas are supervised by the colonial veterinary surgeon and his staff, but it is hoped to transfer this control to the health officers of the respective districts in the near future.

(v) Diseases of animals.

84. The colonial veterinary surgeon reported the following details, inter alia, relating to diseases in animals for the period under review:—

Live stock in the Colony on 31st December, 1938.

Table VI.

	Urban Council Area.	New Territories.	Total.
Cows	2,173	1,400	3,573
Goats	161	200	361
Horses	416	220	636

Swine-number unknown.

(vi) Seasonal prevalence of diseases.

85. The bar diagrams given elsewhere in this report show clearly the seasonal incidence of the various diseases recorded in the Colony in 1938. Unlike 1937, 1938 showed no very marked increase in mortality after the third and greatest influx of refugees in November. The mortality was highest in March, the month when smallpox was at its height.

86. It will be noted from the bar diagrams that smallpox, diphtheria and meningococcal meningitis are mainly winter diseases, cholera is a summer disease, and the dysenteries and typhoid have their highest incidence in late summer and autumn.

(II) General Measures of Sanitation.

(a) Sewage disposal.

87. The unsatisfactory system of sewage disposal for the bulk of the premises in Hong Kong and Kowloon was described in the Report for 1937 to which reference may be made. An eye-witness of the final stages in the disposal of nightsoil from Sanitary Department lighters in Gin Drinkers Bay wrote: "Here, amid scenes which would defy the brush of Hieronymus van Bosch or the pen of de Sode, the faecal matter is baled by human beings into other junks owned by contractors."

88. It is very much to be hoped that this reflection on the sanitary administration of Hong Kong will not be of much longer duration.

89. Direct disposal through sewers into the sea where practicable and safe from the public health standpoint or by way of sewage works (based on the activated sludge and aeration bed principle) is clearly desirable.

(b) Refuse disposal.

90. Details of the system of refuse disposal were given in the Report for 1937 and need not be repeated here.

91. An average of 505 tons of material are collected daily, and a portion of this refuse is carried through the streets by coolies in open baskets. The danger of spread of fly-borne infection to which this system lends itself is apparent, and is a very real one during the summer months. The greater part of the refuse is collected by covered lorries belonging to the Sanitary Department. Seventeen of these lorries work in Hong Kong, eight in Kowloon.

92. There is only one public incinerator on the Island. It is situated at Kennedy Town and is used mainly for burning dirty dressings from hospitals and slaughter house waste. The extension of incineration as a means of disposal is highly desirable. It is the cleanliest of methods and the incombustible material could be usefully employed in filling up reclaimable areas.

93. The present system is apt to be seriously interrupted during bad weather, and was, in fact, temporarily dislocated by the typhoon of September, 1937. It is sometimes impossible, during the typhoon season, for the dust barges to leave their stations while the typhoon signal is hoisted. This means that they have to dump their contents on the shore during that period, a proceeding which is obviously dangerous from the public health point of view.

(c) Drainage.

94. Anti-malarial work costing $54,167.66, was carried out by the Public Works Department in Hong Kong and Kowloon. General drainage work having a bearing on anti-malarial work to a total of $142,420.47 was also carried out.

95. The anti-malarial work carried out by the Malaria Bureau was continued at North Point, Repulse Bay, Aberdeen, the Queen Mary Hospital, Felix Villas, Kowloon Tong, Kai Tak and Lai Chi Kok. In these areas control was obtained over an additional 8,330 yards of stream drainage.

(d) Water supplies.

96. The water services were detailed in the previous report and need not be described again this year.

97. The addition of between 500,000 and 600,000 persons to the normal population as a result of the "Incident" combined with an unusually low rainfall —only 55.4 inches as compared with 82.5 in 1937 and an average of 77.7 for the ten years ending in 1938—gave rise to a disquieting situation and to the imposition of restrictions which had to be tightened up later.

98. Additional water services were laid on with commendable promptitude by the Public Works Department to the Government Camps for refugees at Fanling, Gill's Cutting and Pat Heung, all in the New Territories.

99. As a safeguard against possible infection with cholera and other water-borne diseases, steps were taken to arrange for the chlorination of all Government pipe-borne water supplies and of the large privately owned supply near the Taikoo Dockyard which is occasionally used for ships.

100. The consumption of water from the public reservoirs which have a capacity of nearly 600 million gallons, amounted to 8,662.75 million gallons for the year, an average of 15.82 gallons per head per day on a basis of a population (including refugees) of at least $1\frac{1}{2}$ million.

101. Bacteriological results obtained in 1938 were as follows:—

Table VII.

Samples	*B. coli communis*
1,055	were absent in 50 c.c. (90.5%)
85	were above standard—(B. coli absent in 10 c.c.) (7.3%)
26	were below standard (2.2%)
1,166	Total number of examinations made (of filtered water)

(e) Domiciliary Visiting and Inspections.

102. The health officers and sanitary inspectors undertake the duties of house-to-house inspection. Unfortunately the sanitary inspectors were not under the direct control of the health officers in 1938, but took their orders in the main from the Chairman of the Urban Council of Hong Kong who is head of the Sanitary Department.

103. It is very doubtful whether it is desirable for this body (one of whose main functions is scavenging and street cleansing) to exercise control over the activities of the sanitary inspectorate and those who should form an integral part of the health officers' staff. There is every reason to hope that, with the appointment of a deputy director of health services, there will be a reorganisation of the inspectorate on more up-to-date and effective lines. The present cumbrous and out-moded system very definitely militates against the efficient performance of the duties of the health officers.

104. In the Urban Council Area of Hong Kong and Kowloon there are approximately 23,472 Chinese-type houses, most of them having three storeys. 203,372 floors were cleaned with kerosene oil emulsion during the year. Each of the sanitary inspectors who undertakes domiciliary visiting is, in addition to this duty, responsible for supervising a district containing anything up to 50,000 inhabitants and it can, therefore, be readily appreciated that domiciliary visiting is hardly more than cursory.

105. During epidemics many cases of dangerous disease are "missed", and many fatal cases come to the public mortuaries after being dumped in the streets. This fact alone is enough to demonstrate the inadequacy and inefficiency of the prevailing system.

(f) Offensive trades.

106. During the year under review, 191 premises were licensed for offensive trades in Kowloon and Hong Kong. The different trades were as follows:—

Table VIII.

Bone boiling and storing	20
Chromium plating	5
Cleaning and storing of shark's fins	27
Fat boiling and soap making	40
Feather drying, cleaning, sorting	14
Gut scraping	1
Hair drying, cleaning, sorting	6
Lard boiling	2
Manganese crushing and battery manufacture	34
Packing of skins and hides	1
Pig roasting	23
Rag sorting and picking	10
Resin boiling	2
Tanneries	6

107. These trades are, for the most part confined to areas set aside by the Urban Council for the purpose. The two most dangerous of these trades are battery manufacture and feather cleaning. The primitive methods employed in the manufacture of batteries are only too likely to give rise to cases of manganese poisoning, and the absence of anti-dust measures in the feather cleaning rooms acts as a potential source of pneumoconiosis. Attempts to make the employees wear masks have failed, and it seems that the problem can only be solved by the introduction of legislation to enforce mechanical cleaning.

(III) School Hygiene.

108. A health officer was first appointed to the School Hygiene Branch of the Medical Department in 1925. He is now assisted in his duties by two Chinese health officers, a part time lady medical officer and five nurses.

109. The schools of the Colony may be divided into three groups:—

(i) *Government Schools.* These number twenty-one and contain 6,410 children. At many of these schools children are admitted at about ten or eleven years of age, by which time many health defects have become established.

(ii) *Grant-in-aid Schools.* These number 299 and contain 31,924 children. Many of them are equipped to act as boarding schools.

(iii) *Private Schools.* These number 929 and educate 65,800 children, and most of them are carried on in tenement flats, houses or "non-domestic" premises which were never meant to be used for school purposes. Children are taught in these schools from the earliest years of their school life, and the majority of the school-children who show physical defects come from them. Most of these schools leave much to be desired from the hygiene standpoint. There are 203 in the rural areas of the Colony. Powers exist enabling the director of education to refuse applications for registration and to remove from the register such schools as are not "properly and efficiently carried on".

110. The inspection of schools and school children is carried out by the School Hygiene Branch of the Medical Department. During 1938, 6,186 medical examinations were made at nineteen Government Schools.

111. Dental disease is the defect most commonly noted, and when the revenue of the Colony justifies such expenditure it is hoped to establish a School Dental Service, the complete details of which have been worked out in readiness.

112. Defective vision comes next in frequency, and more than 90 per centum of the defectives suffer from myopia. Its incidence among school children of all ages is 25 per centum and it reaches a maximum in the seventeen year old group, 33 per centum of whom suffer from the defect. Fortunately, most of these errors of refraction are corrected as they appear and during 1938, 584 refractions were done and 555 pairs of spectacles were provided. Trachoma is extremely rare among children attending the Government schools, but it is felt that the children of the poorer classes who attend the private schools would probably show a higher incidence of the disease, as the condition is not uncommon in these strata of the Chinese population.

113. During the year, pulmonary tuberculosis was proved or suspected in fifteen out of 1,773 new Chinese and Indian children (0.8 per centum). Both bacteriological and X-ray examinations are extensively used in diagnosis.

114. Of the 1,953 children examined during the year with special reference to their nutritional state, 15 per centum were noted as undernourished. No mention is made of the criteria employed in arriving at this opinion. Schemes were devised and should come into force in 1938 for the provision of cod liver oil for school children.

115. Postural deformities of chest and spine were found to be very common among the children entering Government schools; and it is unfortunate that little or no attention is paid to systematic physical training in the private or vernacular schools. This is in marked contrast with the excellent provision in Government institutions.

116. Attendances at the school clinics during the year were as follows:—

Table IX.

Ellis Kadoorie School Clinic	1,479
Violet Peel Health Centre	525
Yaumati General Clinic	617
Special Clinic for ophthalmic diseases	382
Special Clinic for ear, nose and throat diseases	262

117. The nurses attached to the schools made 205 visits to the homes of children during the year to give advice about minor ailments.

118. Fifty-four cases of infectious disease were recorded among school children in 1938. 4,818 anti-cholera inoculations and 509 vaccinations against smallpox were carried out by the school medical staff during the year.

119. 432 visits of inspection of school premises were made in 1938, compared with 614 in 1937. No regular inspection of registered schools has yet been instituted but should be practicable in 1939 when the School Health Staff will be augmented by the appointment of a sanitary inspector.

120. The hygienic condition of many of the private schools is poor. They are overcrowded, poorly lit, inadequately ventilated, lacking in furniture, deficient in latrine accommodation and defective as regards water supply and means of disposal of refuse.

121. The legislation relating to school hygiene is imperfect and has been the subject of much adverse criticism, but a new health code has been drawn up in consultation with the director of education and it is anticipated that the necessary amendments will come into force in 1939.

122. It is abundantly clear that the only way of teaching hygiene is to see that hygienic standards are adopted and hygienic methods practised by those being taught. It is impossible to practise modern surgery in a cowbyre; in the same way it is impossible to inculcate modern standards of hygiene in a hovel. The repetition of a sentence or a set of sentences daily is not enough.

(IV) Labour Conditions.

123. Generally speaking, labour conditions in Hong Kong are unsatisfactory, and it is not likely that they will improve until a labour code is introduced fixing a minimum wage and ensuring adequate housing. This state of affairs was fully appreciated by the Governor who took steps in 1938 to appoint a special labour officer to investigate conditions and to advise on legislation.

124. The legislation enacted in 1937 which enabled the health authorities to require employers of labour in the New Territories to provide suitable housing for their labourers has already proved of considerable value—agreement having been reached between the Military Authorities of the China Command and the Public Works and Medical Departments towards the end of the year.

125. The deterioration in labour conditions which was noted in 1937 has been aggravated during 1938 by the continued arrival of refugees from China. Many of the male refugees sought work in the Colony with the result that the existing surplus of labour was augmented, and wages dropped still lower. The rate of pay for casual male labour is now about 40-60 cents a day and is even lower for casual female labour. Investigations made during the year have shown that the average wage paid for different types of labour is as given in Table X :—

Table X.

Coolie hire H.K.	$ 0.50 - $ 0.60	per day	(casual)
	$ 1.00	,,	(wharf)
	$ 1.20	,,	(rickshaw)
	$ 1.45	,,	(stevedore)
Lorry hire (2½ tons lorry)	$ 1.60	per hour	casual
	$ 1.35	,,	by tender
Sampan hire (2 ton)	$ 2.00	per day	
Junk hire (35 ton)	$15.00	,,	
Steam launch hire	$ 5.00	per hour.	

126. An average working day is nine hours, but not infrequently this is increased to thirteen or fourteen hours by over-time. Wages vary with the occupation, women making electric batteries being paid as little as fifteen cents a day. Instances have come to light where women working in, for example, ginger cleaning factories received only ten cents for ten hours labour. Two mines are worked in the New Territories, only one of which has satisfactory accommodation for its labourers, although steps are being taken to rectify this deficiency at an early date. The bulk of Hong Kong labour is employed in factories and workshops, in transport, engineering, ship-building, fishing, market gardening and house-building.

(V) Housing and Town Planning

127. The Building Ordinance, No. 18 of 1935, controls housing in the Colony. The poorer class Chinese live for the most part in houses with narrow frontages built back-to-back. These houses frequently have conservancy back-lanes six feet or more in width. The older type of house is usually a three storeyed building with a frontage of sixteen to twenty-five feet and a depth of thirty-five to forty feet. The ground floor is often used as a shop, while the rooms in the upper storeys are divided into three or more cubicles by partitions six to eight feet high. The kitchen is at the back of the house, and the one latrine which is on the ground floor serves the whole building. In some of the more modern tenement buildings each floor is provided with a latrine.

128. In some districts the lanes between tenement blocks are built over by "riding floors" and the covered-in area serves as a street in which hawkers ply their trade, and as a refuse dump for the adjacent blocks of buildings. It is scarcely necessary to point out that such buildings are worthy of condemnation from every point of view, and it is hoped that many of their shortcomings may be counteracted by legislation passed in 1935. This legislation will also demand a much higher standard for future buildings.

129. The houses of the poorer Chinese are grievously overcrowded, and this state of affairs has been steadily aggravated by the continuous inflow of refugees into Hong Kong. The conversion of a certain number of dwelling houses into factories to replace those destroyed in China by the war has also added to housing difficulties. A further factor affecting this state of affairs relates to the manner in which many unscrupulous landlords or their agents and principal tenants exploited the housing shortage consequent upon the arrival of tens of thousands of refugees.

130. Rents were raised to such an extent that real hardship and injustice made some form of rent control absolutely imperative. A Rents Commission was appointed by the Government which was seriously concerned with the distress and discontent, and although its findings did not help greatly to a solution of the problem, Government introduced the Prevention of Eviction Ordinance, No. 6 of 1938, which gave the right, inter alia, to aggrieved persons to appeal to the Supreme Court in cases where unconscionable terms were being demanded.

131. The hope of the future lies in the legislative action which it is anticipated will be taken as the result of the findings of the Housing Commission. The Commission was appointed in 1935 and submitted its final report towards the end of 1938.

132. Private building has been decreasing in amount owing no doubt to the threats and rumours of war. It is fair to say that planning and zoning are practically non-existent in the older parts of Hong Kong, with the exception of the areas set apart by the Urban Council for offensive trades, but it is hoped to introduce legislation at an early date to effect zoning. In Kowloon, on the other hand, town planning has been carried on in the newer parts of the town with extremely beneficial results.

133. Building is controlled by the Public Works Department, and the Health Division of the Medical Department serves in an advisory capacity. The Sanitary Department working under the aegis of the Urban Council in the Urban Council Area has, needless to say, nothing to do with housing, but is merely entitled to remove obstructions. This is shown in the appended table:—

Table XI.

Nature of work.	*No. in 1937*	*No. in 1938*	*By whom supervised*
1. Obstructions removed from open spaces	1,240	1,109	Sanitary Department.
2. Obstructions to light and ventilation removed	1,598	1,936	do.
3. Houses demolished (domestic)	167	50	Public Works Department.
4. Houses demolished (non-domestic)	3	7	do.
5. Houses erected (domestic)	160	184	do.
6. Houses erected (non-domestic)	14	37	do.
7. Houses reconstructed (domestic) ...	135	184	do.
8. Houses reconstructed (non-domestic)	5	13	do.

(VI) Food in Relation to Health and Disease.

134. The construction of the new Central Market in Victoria was almost finished during 1938.

135. The inspection of health conditions in markets is still undertaken by the colonial veterinary surgeons, an anomaly which will, no doubt, be rectified when such health activities come under the control of the health officers.

136. Hawkers of foodstuffs in the public highways afford and will continue to afford one of the most difficult public health problems in the Colony. Both the method of preparation and the lack of protection of the food are objectionable from the hygienic standpoint, and although efforts have been made to discourage hawking in selected areas it must be admitted that no solution has yet been found to this problem.

137. In view of the recurrence of cholera in 1938, and the prevalence of typhoid and dysenteric infections, it became necessary to introduce legislation restricting the sale of ice-cream, non-aerated fruit-juice, jellies and uncooked fish. The sale of cut and peeled fruit was prohibited. Reference has already been made to legislation to enforce compulsory pasteurisation.

138. The Adulterated Food and Drugs Ordinance empowers health officers, veterinary surgeons and sanitary inspectors to take samples and submit them for analysis. Table XII gives the analyses carried out during the year.

Table XII.

Food or drug	*No. of samples analysed*	*No. found adulterated*
Butter	18	—
Cheese	25	1
Cream	24	—
Lard	6	1
Milk (reconstituted)	45	—
Condensed milk and condensed skim milk	10	—
Milk (fresh)	118	5
Milk (unsweetened, evaporated)	7	—
Dried milk, full and half cream	10	—
Tea	31	3
	294	10

139. The following foods were seized and destroyed:—bread 96 lbs. confectionery 3 lbs., fish 59¼ lbs., flour 10,920 lbs., fruit 45 lbs., meat 850 lbs., condensed milk 1 lb., offal 260 lbs., tea 7,164 lbs. and vegetables 385½ lbs.

140. The following foods were voluntarily surrendered and destroyed:—bread 1,145 lbs., condiments ¾ lb., confectionery 847 lbs., eggs 1,280 lbs., fish 924½ lbs., flour 3,080 lbs., fruit 982½ lbs., jam 26½ lbs., meat 6,794¾ lbs., milk (condensed and powder) 7,427 lbs., tea 5,000 lbs. and vegetables 1,445½ lbs.

141. There are two large dairies in the Colony, one Chinese owned on the mainland, one European owned on the Island. The Queen Mary Hospital was built within a few hundred yards of the latter and as a result is inundated with flies during the summer months.

142. Every effort is being made with Government approval to find a suitable site for a new farm on the mainland to which that adjoining the Queen Mary Hospital can be removed during the next few years. The fullest cooperation in this and in an endeavour to abate the fly-nuisance on the farm is forthcoming from the company concerned but while cattle, feeding materials and manure remain in the area, the presence of flies will continue.

143. The plague in the most up-to date and costly hospital in the Colony became so great a danger in 1938, that permission had to be obtained to enclose with wire gauze the kitchens and infectious diseases wards.

144. Acknowledgment is due to the Superintendent of the Botanical and Forestry Department for the following notes on the present agricultural policy of the Colony which, of course, has a distinct bearing upon the problem of nutrition:—

"The present agricultural policy is somewhat difficult to define as the point of view must be taken into consideration. The bodies chiefly concerned are (i) the local agricultural population, and (ii) such bodies as are interested in the matter. The latter may be considered to be (a) Government, (b) the Agricultural Association of the New Territories, and (c) a few wealthy Chinese.

In regard to (i), their policy is to produce sufficient crops to provide them with a living and as an adjunct they are considerably interested in the rearing of pigs. The main crop is rice and practically all other crops are subordinated to its production. Subsidiary crops produced on a reasonable scale are sweet potatoes, ground nuts, sugar cane and vegetables (Chinese and foreign). Other crops produced on a very limited scale are jute, taro, tapioca and ginger. Fruits are poorly represented, consisting chiefly of pineapple and litchi, while oranges, papayas and bananas are occasionally met with.

In respect to (ii), the various bodies mentioned are proceeding along the following lines:—(a) Government has a general interest in the matter and is obtaining accurate information in regard to the subject generally with a view to assessing possibilities for development; (b) the Agricultural Association of the New Territories is chiefly concerned with vegetable (foreign) trials with a view to seed distribution of useful varieties; (c) wealthy Chinese are trying out various things.

In general, cultivation is confined to level areas and the crops produced are few in number. The present general policy is, to endeavour to enlarge the agricultural outlook of the peasant population with subsequent profit to themselves and increased production for local supply purposes.

Possibilities.

The possibilities may be summed up as follows:—(i) increase in area, (ii) increase in crop production, (iii) increase in number and quality of crops. In respect to (i), increase in area is possible by utilisation of slopes and carrying out certain reclamations. In regard to (ii), increase in crop production is dependent upon some change in local practices and the introduction of up to date methods in regard to use of soil, manuring, etc. With regard to (iii), this can only be achieved by an organisation working along approved lines.

In general, there is scope for some considerable development which should result in increased production of present crops and the cultivation of additional crops in which fruits should play a larger part."

145. The most important Government slaughter house is at Kennedy Town on the Island. Smaller ones are situated at Aberdeen and Sai Wan Ho on the Island and at Ma Tau Kok on the mainland.

146. Humane slaughtering is not yet employed as extensively as it should be. The following animals were killed at the abattoirs in 1938:—cattle 78,277, sheep and goats 15,657, and swine 510,297.

147. The slaughter houses are under the control of the Veterinary Branch of the Sanitary Department.

148. The wage level of the labouring classes in Hong Kong is so low that serious malnutrition is frequently met with.

149. The following tables show the composition of typical meals for members of the coolie class and how they vary with the income earned.

Table XIII.

Income $30-45 a month.	*Weight.*	*Cost.*
Rice	10.2 oz.	$0.032
Vegetable	2.6 ,,	0.004
Meat	1.95 ,,	0.030
Oil		0.020
Salt		0.002
Soya bean		0.002
Firewood	½ bundle	0.040
		H.K. $0.130

Income under $30 a month.	*Weight.*	*Cost.*
Rice	10.2 oz.	$0.032
Vegetable	2.6 ,,	0.004
Oil		0.013
Salt		0.002
Soy		0.001
Saltfish	2.6 ,,	0.028
Firewood	¼ bundle	0.020
		H.K. $0.100

150. These figures show that the average cost of a meal for a coolie in Hong Kong is about 10-14 cents, and investigations have shown that the average minimum price paid per meal at a food-stall or to a hawker is 12 cents.

151. Deficiency diseases occur, the commonest being beriberi. Osteomalacia, pellagra, rickets and scurvy are rare. Beriberi is a serious problem, as it is very widespread both among infants and adults. It causes much ill-health and permanent disability and is a frequent cause of death at all ages. Out of a total of 38,819 deaths in 1938, 2,673 were attributed directly to beriberi. It will be noted that this figure represents an increase of over 1,000 on the 1937 figure. This fact in itself shows how much the standard of living and nutrition must have declined among the poorer classes of the community during 1938.

152. An enlarged Nutrition Research Committee was appointed by the Governor in 1938 to investigate nutritional problems in the Colony, and it is hoped that some light will be shed on practicable methods of prevention as a result of its activities.

(B) Measures taken to spread the knowledge of Hygiene and Sanitation.

153. The fatuity of giving lessons on hygiene in buildings which run counter to every tenet of the hygienist's faith has already been touched upon.

154. The maternal and child welfare centres continue to do valuable work in teaching personal hygiene and mothercraft to the women who visit them, and the health nurses are able to teach some domestic hygiene when they visit the mothers in their homes.

155. The seventy-six registered midwives are expected to attain a reasonable standard of hygiene in their midwifery homes in the overcrowded areas. These homes are inspected periodically by the supervisor of midwives, one of the lady medical officers, and it is felt that these cases of cleanliness in a desert of dirt may serve as shining examples of how to triumph over environment.

156. It would naturally be thought that the sanitary inspectorate would play a leading part in inculcating the principles of hygiene into those whose lot it is to live in overcrowded and unhealthy areas. This should be possible once the Sanitary Department has been reorganised with the inspectorate under the direct supervision and control of the health officers.

157. A certain number of lectures are given on hygiene and first aid by officers of the Medical Department, by the staff of the Chinese Public Dispensaries and by the St. John Ambulance Association, and use is also made of the English and Chinese Press and broadcasting for propaganda work.

(C) Training of Sanitary Personnel.

158. Courses of instruction are given by the medical officers of health, the malariologist and an engineer of the Public Works Department, and these include demonstrations in sanitation, entomology and sanitary engineering.

The system of control of sanitary personnel has already been the subject of remark in this report. Until the present unsatisfactory system is done away with, the training of the sanitary staff will continue to be imperfect and inadequate.

159. An examination for the Sanitary Inspector's Certificate of the Royal Sanitary Institute was held in Hong Kong in 1938 and eleven candidates were successful.

(D) Recommendations for Future Work.

160. In connection with the recommendations contained in the Report for 1937 under this head it may be of interest to point out that the following action has been taken.

It is anticipated that the sanitary inspectorate will come under the direct control of the health officers as soon as the deputy director of health services assumes duty, a change which should allow reorganisation of the health administration of the Colony and improvement in the training of the sanitary personnel.

161. The estimates for the current year provide for the increase in staff recommended in the Report of 1937. A deputy director of health services, two European health officers, two Chinese health officers and an addition to the health personnel for Hong Kong and the New Territories have been provided for in 1939.

162. The Public Works Department has under consideration the question of extending the main sewerage system in Hong Kong and Kowloon, but unfortunately it has not yet been found practicable to improve the system of refuse disposal.

163. The report of the Housing Commission appointed in 1935 is receiving the close attention of Government, and a committee to deal with this question has been appointed under the chairmanship of the Chairman of the Urban Council. Until this committee reports it is to be feared that no action will be possible in relation to slum clearance.

164. Provision has been made in the estimates of the current year for covering Albany Road Reservoir and for the filtration and sterilisation of pipe-borne water in the Pokfulam area but it is feared that the former vitally important work will not be started until October, 1940.

165. A scheme has been devised for establishing a School Dental Service, but it has not yet become operative owing to the apprehended fall in the 1939 revenue of the Colony following upon the extension of hostilities to South China.

166. Discussions are taking place between the Government and the University authorities and it is possible that plans will be evolved in 1939 which will enable the nucleus of an Institute of Public Health to be created in 1940.

167. Plans have been drawn up for a new 300-bed infectious diseases hospital, one of the most urgent needs of the Colony, and preliminary estimates suggest that the cost will amount to rather less than two million dollars.

168. A draft scheme has been prepared for the establishment of health centres in various parts of the urban and rural areas, but its operation will also depend on the financial resources of the Colony.

IV.—PORT HEALTH WORK AND ADMINISTRATION.

169. The Sino-Japanese hostilities have continued to affect the volume of shipping calling at Hong Kong. The decrease in the number of ships calling at the port was temporarily offset by the closure of Shanghai as an international port.

170. During the year under review 3,996 British vessels entered and cleared the harbour as compared with 4,322 in 1937. To this number must be added 3,132 foreign vessels, which had totalled 5,202 in the previous year.

171. River steamers, launches and foreign trade junks also showed an appreciable decline, the figures for each class being 6,780, 1,585 and 9,177 respectively. The tonnage fell from 36,191,724 in 1937 to 29,530,384 in 1938. 3,554 inward bound ocean-going vessels were boarded by port health officers.

172. Vessels from Canton, Macao and West River ports and smaller craft were visited when information had been received of sickness or death on board. Periodic inspections of these vessels were carried out with the two-fold purpose of ridding them of rats and promoting higher standards of cleanliness on board.

173. During 1938, 226 special visits were made to ships as compared with 129 in 1937 to see people suffering from infectious but non-quarantinable disease. Twenty-eight out of fifty-nine bodies landed from vessels were examined at the Public Mortuary.

174. 1,732 bills of health were issued in Hong Kong during the year under review, though their utility has been called in question in many parts of the world and doubt exists as to their value in the Far East, doubt which is considerably intensified when the prevailing disturbed conditions are taken into consideration.

175. As there is no quarantine immigration station in Hong Kong, observation of passengers and crews ashore is impracticable. When such observation becomes necessary, it has to be carried out on board at one of the two quarantine anchorages to which vessels go when arriving from ports "infected" within the meaning of the International Sanitary Convention of 1926. Eleven "infected" ships were quarantined in 1938 and 145 "healthy" vessels carrying deck passengers were kept in quarantine for observation for periods varying from twenty-four to seventy-two hours. 1,115,067 persons were medically examined on arrival, making an average of 3,055 a day.

176. The precedent established by the imposition of quarantine measures against arrivals from Canton and Macao, on account of smallpox and cholera, was a very definite advance; although the medical inspection of passengers had to be carried out under somewhat unfavourable conditions. The overcrowding of the river vessels made it impossible to adopt the procedure followed in the inspection of ocean-going vessels.

177. 13,657 people were inoculated against cholera by port health officers, owing to the epidemic conditions prevailing in Hong Kong and neighbouring ports.

178. The Vaccination Ordinance of 1923 was rigorously enforced, and all passengers arriving in Hong Kong had to be vaccinated, unless they either showed satisfactory evidence of vaccination against smallpox within the previous five years, or had suffered from smallpox. 348,444 persons were vaccinated on board ship or at the Vaccination Centre staffed by vaccinators working under the port health officers.

179. Radio-pratique, that is the granting of pratique to incoming vessels by wireless, was introduced during the year. This procedure has had to be confined to vessels carrying no passengers of third or inferior classes.

180. All emigrants from the Colony are medically examined, and vaccinated if necessary, before leaving. 124,186 emigrants were examined in 1938, of whom 122,820 paid for their passages while 1,366 had their passages paid for them. 360 emigrants were rejected, 74,867 were vaccinated.

181. The following table shows the number of emigrants leaving Hong Kong and the proportion proceeding to the Straits Settlements during the past five years:—

Table XIV.

	1934	1935	1936	1937	1938	Average for period
To Straits Settlements	86,192	102,674	101,499	165,177	61,405	103,389
Total to all ports	138,240	158,300	164,077	245,488	124,186	166,058

182. The Fumigation Bureau of the port health authority is now responsible for disinfecting ships and ridding them of rats. Deratisation certificates and deratisation exemption certificates numbered ninety-one and eighty-eight in 1938, as compared with seventy-nine and fifty-eight in 1937. The details of the methods employed in the disinfection and disinfestation of ships are given in the Report of 1937.

183. Sanitary control of aerial traffic is enforced under the Quarantine and Prevention of Diseases Ordinance, No. 7 of 1936, and regulations governing aircraft which were issued in 1937.

184. A new air-service, Air France, came into being during the year, and there are now six companies making regular calls at Hong Kong. No cases of infectious disease were discovered in passengers or crews arriving by air, nor were any reports received of such illnesses occurring in persons who had left Hong Kong by air.

185. This table gives details of Hong Kong's air-traffic:—

Table XV.

Nationality of aircraft	ARRIVALS			DEPARTURES		
	Aircraft	Passengers	Crew	Aircraft	Passengers	Crew
British	116	150	252	115	200	230
Chinese	458	5,330	1,802	475	3,261	1,850
American	35	325	274	35	316	273
French	24	201	94	24	186	94
Total	633	6,006	2,402	649	3,963	2,447

V.—MATERNITY AND CHILD WELFARE.

186. Accommodation for maternity cases in the Colony amounts to 378 beds. Private maternity homes also house a large number of cases, and eighty-eight of them were inspected during the year.

187. At the end of the year there were 712 names on the Midwives Register. Fifty-four candidates satisfied the examiners at the examinations carried out under the auspices of the Midwives Board.

188. The Medical Department employs sixteen midwives who are stationed in Chinese Public Dispensaries at Aberdeen, Kowloon City, Shamshuipo, Shaukiwan, Stanley and Yaumati, and at Government Dispensaries at Fanling (Ho Tung), Sham Tseng, Sai Kung, Tai O, Tai Po and Un Long. Free service is given to the poor by these midwives who also visit the mothers before delivery and the mothers and their babies during the week after delivery.

189. Visits to expectant mothers numbered 2,775 and to puerperal mothers 10,635. During the year under review 11,119 mothers were taught how to wash their babies.

190. 2,862 mothers were visited during the year, an increase of 209 on the figure for 1937. The majority of the mothers visited had enjoyed normal labours, but this number comprised twenty abortions, nineteen miscarriages, twenty-eight premature births and fifty-one still births. In sixty instances the mothers were taken by ambulance to hospital, usually on account of delayed labour and usually after the medical officer from the nearest dispensary had been called in. Apart from deaths amongst those complicated cases, only two mothers attended by Government midwives died.

191. The midwives when not practising their art help in first aid work at the various dispensaries. The supervisor of midwives (a qualified woman medical practitioner) functions as a general inspector of these women and their work, and investigates cases of complicated puerperium, causes of death in infants and complaints lodged against the midwives.

192. Ante-natal and infant welfare work is carried on at a large number of centres including the Violet Peel Health Centre, the Government Welfare Centre in Kowloon and numerous hospitals and dispensaries. The six Government dispensaries in the New Territories and nine centres maintained by the St. John Ambulance Association also help in this work.

193. The average daily attendance at the Government centres in Kowloon and Wanchai was 175 and 165 respectively, the total attendances for the whole year being 63,768 at Kowloon, 60,278 at Wanchai. The total number of infants seen during the year at both centres was 124,046, and this remarkable increase, compared with the figure for 1937, is to be ascribed mainly to the refugees from South China. The average age of the infants at their first appearance at the clinics was eight months.

194. Synthetic milk, whose composition may be found in last year's Report, continued to be given daily to nursing mothers and their infants who are fed at the centres, and the Society for the Protection of Children continues to render assistance by supplying milk to those babies whose mothers cannot afford it. The Society now supplies milk direct to the centres, instead of to mothers sent from the centres, an arrangement which allows fuller records to be kept.

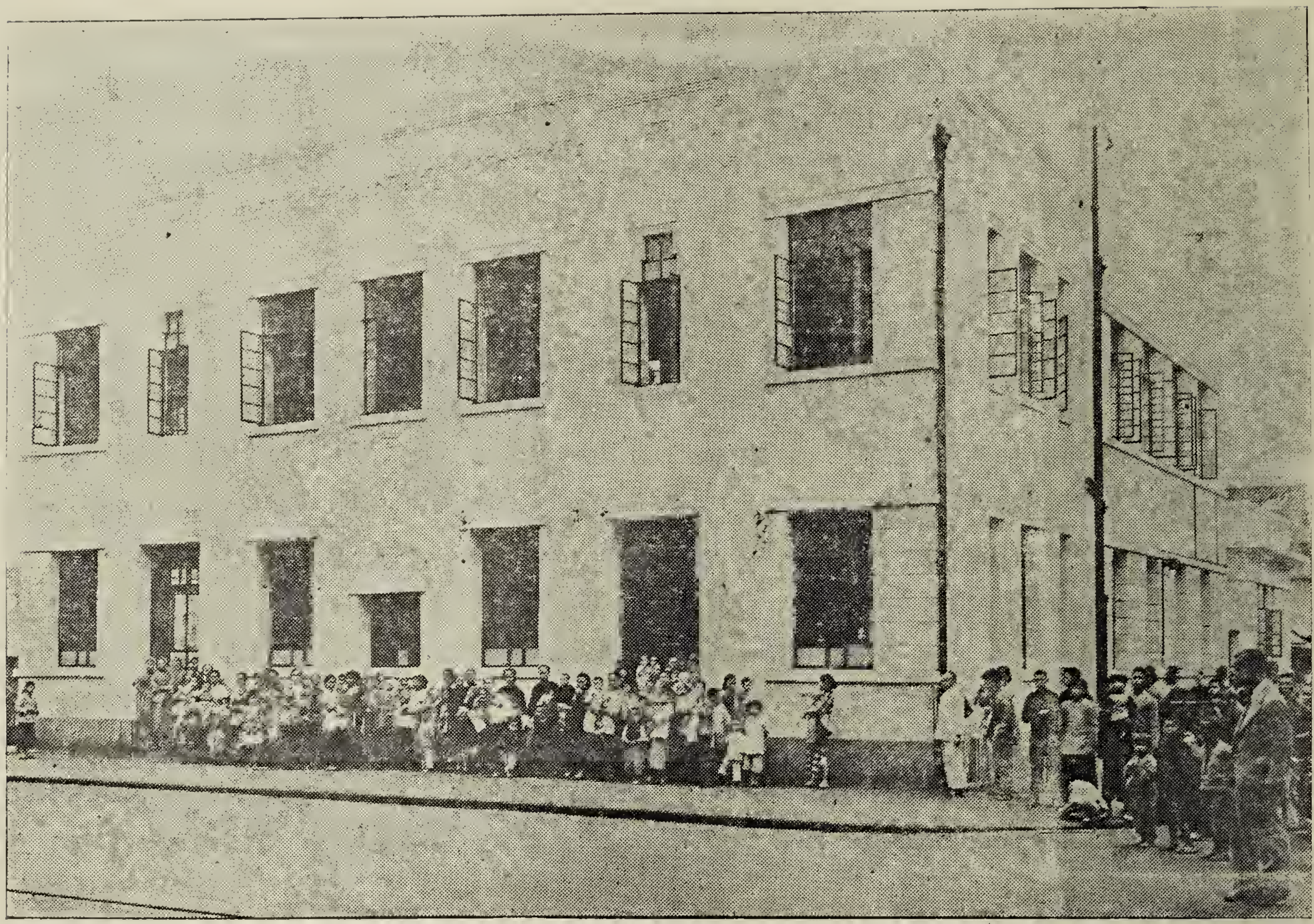
195. The majority of the infants brought were found to be suffering from digestive disturbances or malnutrition of some degree. No case of rickets was observed. Conjunctivitis was second in importance and was closely followed by respiratory diseases of various sorts. Thrush was very common, 594 cases being seen during the year at the two centres.

196. The soup kitchen at each centre gave over 100 meals daily. During 1938, 3,060 anti-cholera inoculations were given to mothers and older children, and 963 vaccinations were performed against smallpox. In the early part of the year 1,065 bloods were tested for the Wassermann reaction and forty-eight were found to be positive. Later, this investigation had to be discontinued owing to the pressure of work at the Bacteriological Institute.

197. Home visits were continued throughout the year and 3,078 were paid by nurses from the centres to the homes of babies attending.

198. The Eugenics League which was formed in 1936 received the official recognition of Government during 1938. The League was permitted to make known to married women who have already had children and who desire advice on the spacing and limiting of families on health grounds, where such information was obtainable. Sessions were held at the two Government Welfare Centres once weekly under the supervision of a European and two Chinese lady medical officers. The number of mothers who availed themselves of these facilities rose from 217 in 1937 to 291 in 1938. Pregnancies in this group numbered 1,529, an average of 5.7 per mother advised. The average age of the mother was thirty-one.

199. To those whose duty it is to come into close contact with the very poor living in dangerously overcrowded tenements, where more than one infant in three dies before attaining a year and where so many of the children who survive are underfed and sickly, the need for extension of the work of the League is more than apparent.



The Violet Peel Health Centre.

Mothers receiving a meal.

Babies being weighed.

Babies being bathed.

VI.—HOSPITALS, DISPENSARIES AND VENEREAL DISEASES CLINICS.

200. The list of Naval, Military, Government Civil, Chinese and private hospitals is given in Return B. to this Report. Those who are interested in the details of these hospitals are referred to the Report for 1937.

201. Certain changes and additions in hospital accommodation are, however, worthy of note. These were necessitated by the very serious overcrowding following an increase in the normal, peace time population of nearly 50 per centum by refugees.

202. To give one or two examples of such overcrowding from the writer's actual experience in visits to Chinese hospitals during the year:—wards scheduled to accommodate thirty patients had twice this number, mostly on the floor between beds making approach to and nursing of such unfortunates very difficult; a small ward for sick women, mostly old, possessed seven beds grouped together on which nineteen had to find a resting place; two wards containing forty maternity beds with sixty-six women. Many other examples could be cited and the state of affairs was aggravated in the largest Chinese hospital (until strict measures were taken with the Chinese directorate) by the presence in the precincts of the dangerously overcrowded wards—containing cases of dysentery, typhoid, tuberculosis, cerebro-spinal meningitis, etc.,—of nearly eight hundred refugees.

203. Appreciating the urgent need for increased hospital accommodation, Government sanctioned the conversion into a relief hospital of buildings erected originally to house emigrant Chinese labourers to South Africa and subsequently utilised as the main prison for men prior to the opening of the new Hong Kong Prison at Stanley.

204. These blocks were opened on 4th May, 1938. The lower portion provides space for 300 beds and the upper for 200. The furnishings of both portions are on a rather primitive scale—with wooden beds and few of the usual adjuncts of a hospital, but the accommodation has proved most valuable and has relieved the worst of the pressure on the bed-space in the Chinese hospitals. Efforts have been made to admit only those patients from the wards of the Chinese hospitals who were convalescent or were suffering from malaria, beriberi and the like and, with appropriate treatment, could be improved and returned to civil life in a comparatively short time. The only exception to this restriction of type of patient relates to one ward devoted to children suffering from bony tuberculosis—sometimes complicated by pulmonary lesions—who had hitherto been housed under quite intolerable conditions in the darkest and oldest portions of the largest Chinese hospital. The little patients have repaid this special concession by their improvement in health. The upper blocks of this auxiliary hospital were fly-proofed and proved an invaluable asset during the height of the cholera outbreak in 1938. They will be needed for the dangerous infectious diseases until a new infectious diseases hospital has been built on the Kowloon Medical Centre.

205. As a further means of meeting the demand for beds in the Kwong Wah Hospital (one of the three Chinese hospitals), marquees were obtained on loan through the kind offices of the Military Authorities; these provided shelter for between seventy-five and 100 patients. Atmospheric conditions in these marquees at the height of the summer and in the heavy rains are far from ideal and there is a constant danger of such structures succumbing to the force of typhoons; consequently, it is hoped to replace them by more permanent buildings in 1939.

206. The shortage of hospital facilities gave rise to deep anxiety and the Governor appointed a committee under the chairmanship of the writer of this Report to advise as to the actual needs and how best they might be filled. The committee met on eleven occasions during the year to receive evidence and to collect and collate data. It had not completed its deliberations by the end of the year, but its findings should be available during the summer of 1939.

1. Queen Mary Hospital.

207. The year 1938 was the first complete calendar year in the history of the Queen Mary Hospital which, it will be recalled, was opened on the 1st of June, 1937.

Many had doubted whether the hospital would be patronised by the general public owing to its comparative isolation from the centre of the city. The record of the year's work has proved these doubts to be without foundation. Far from being "unpopular", the reverse has been the case as demonstrated by the fact that the number of admissions totalled 10,819 in 1938 which is actually double the number for the former Government Civil Hospital during the latter years of its existence.

208. The number of in-patients remaining in hospital at the end of December, 1937, amounted to 307 and this had increased to 405 by the end of December, 1938.

209. The wards assigned for traumatic surgical cases were invariably full during the year under review; in fact, extra beds have had to be introduced on a permanent basis into these wards.

210. Two wards of twenty beds in each were opened for the treatment of those cases of pulmonary tuberculosis in which the prognosis was reasonably favourable to justify elaborate therapeutic measures as, for example, collapse therapy. Some 170 of the 546 beds have been allotted to the three University professorial units and the reports of the Clinical Professors are included in "Section IX, Scientific."

211. Reference has been made elsewhere in this Report to the fly-menace from the Dairy Farm and to the fly-proofing of kitchens and infectious diseases wards.

212. Other changes included the purchase of a deep X-ray therapy apparatus at a cost of £5,500 and the provision of poison cupboards for dangerous drugs in all duty rooms (with still more rigid regulations regarding the custody and use of such drugs) following upon a particularly unfortunate fatality in which a small boy succumbed to the effects of atropine poisoning. Permission has been obtained to increase the staff of European assistant apothecaries and one will be in permanent residence at the hospital in future to supervise all dispensing —and especially the preparation of solutions of dangerous drugs.

213. Further details of the activities of the hospital are recorded in Tables XVI and XVII. Attention is invited to the low mortality in maternity cases, which, of course, include many abnormal labours.

Table XVI.

In-patients.		
General	10,117	
Maternity	702	
Total		10,819
Daily average	362	
Chinese	7,477	
European	1,219	
Indian	1,260	
Russian	44	
Other nationalities	117	
Treated by Government Officers	8,677	

Treated by University Staff:—		
Medical	562	
Surgical	450	
Gynaecological	428	
Nationality of maternity cases:—		
British	75	
Chinese	571	
Indian	41	
Japanese	2	
Portuguese	8	
Russian	2	
Other nationalities	3	
Operations:—		
By Government Officers	1,269	
University Staff	1,162	
Total		2,431
Deaths:—		
General in-patients	686	
Maternity cases	3	
Total		689
Stillbirths	30	
Mortality rates per thousand.		
General in-patients	67.8	
Maternity cases	4.0	
Combined		63.7

214. The number of in-patients dealt with in Government Hospitals on the Island amounted to 10,819 as compared with 8,728 in 1937. The daily average rose from 253 in 1937 to 362 in 1938. Further details are contained in Table XVII given below.

Table XVII.

OUT-PATIENTS (NEW CASES).

	Queen Mary Hospital	Govt. Civil Hospital		Total in 1938
		Govt. Civil Hospital & C. Block	Queen's Road Clinics	
General	2,554	42,021	—	44,575
Medical (University) Unit	—	—	2,501	2,501
Surgical (University) Unit	—	—	4,515	4,515
Gynaecological (University) Unit	—	—	2,783	2,783
Eye Clinic (Government)	—	—	2,517	2,517
Venereal Diseases (Government)	—	—	1,627	1,627
Total	2,554	42,021	13,943	58,518

2. Kowloon Hospital.

215. The Report for 1937 should be consulted for a description of the hospital and its accommodation. A small infectious disease block of six single-bed wards was added at the close of the year. It enables a proportion of the cases of diphtheria, measles, typhoid and other infectious diseases to be nursed separately and away from the general wards. Needless to say, this block is too small to deal with the problem created by the existence of infectious diseases in Kowloon and the New Territories which can only be met by the erection of a large hospital capable of expansion to 500 beds. It is, however, a useful addition.

216. The question of a new general hospital of 500 or more beds for Kowloon received the careful consideration of the committee referred to in paragraph 206 of this Report.

217. One of the conclusions reached by this committee was to the effect that there was an urgent demand for general hospital beds on the mainland to meet the needs of the normal population—omitting altogether any question of temporary needs due to the refugee element.

218. Government sanctioned work on the site formation adjoining the existing hospital for the new general hospital pending the completion and approval of plans, and a start was made on preparing the site at the end of the year under review.

219. In-patients during 1938 totalled 3.524 as compared with 3,705 in 1937. This figure comprised 2,509 Chinese, 661 Europeans, seventeen Indians and 337 people of other nationalities. 1,253 operations were performed under general anaesthesia. Deaths among in-patients amounted to 292.

220. The out-patient service has been severely taxed. The number of out-patients seen during the year totalled 94,883, and to this figure must be added 743 and 3,536 attending the ear nose and throat and eye clinics respectively, and 51,269 attending the venereal diseases clinic, the grand total for Kowloon Hospital being 105,884.

221. 1,905 patients were treated in the maternity block at Kowloon Hospital, a daily average of twenty-seven for the thirty-four beds. 1,761 women were delivered normally, three died in childbirth and there were thirty-four stillbirths. The maternal mortality was due in two cases to placenta praevia and in one to toxaemia.

222. Women of all nationalities were encouraged to attend the ante-natal clinics at Kowloon Hospital, and 4,466 availed themselves of the opportunity of doing so in 1938.

223. The average cost per patient per day, taking everything into account, was $0.81 as compared with $1.04 in 1937.

(a) *Anaesthetics.*

224. A full-time Government anaesthetist is employed and the number of anaesthetics given by this officer and by other Government medical officers, and the methods used are given in the following table:—

Table XVIII.

	Queen Mary Hospital	Kowloon Hospital	Total
Chloroform	16	18	34
Ether alone or + ethyl chloride	811	486	1,297
Ether + evipan induction	99	120	219
Nitrous oxide + oxygen	47	46	93
Spinal	237	—	237
Evipan	501	552	1,053
Other methods (including local)	195	31	226

225. Ether is still the most commonly used anaesthetic in the Colony, and evipan takes second place. Spinal anaesthesia continues to be used with success, and the method proves of great value. Nitrous oxide cannot be used in routine practice as its cost is prohibitive.

(b) Radiology, Electro-therapeutics and Massage.

226. The staff remained the same as in 1937, but the effective X-ray staff was reduced by home leave to three persons. The remarkable increase in the activities of this sub-department commented on in last year's report has continued throughout 1938. Data for the last five years are given in Table XIX.

Table XIX.

	1934	*1935*	*1936*	*1937*	*1938*
Massage, electrical treatment	12,947	18,077	10,465	11,775	19,680
Radiological examination	3,991	4,897	5,511	6,690	9,703
Films exposed	8,208	8,577	9,193	12,784	15,272

227. The Queen Mary Hospital was completely equipped for modern diagnostic examinations during the year, and the machine designed for the operating theatres was installed in October.

228. During the earlier months of the year, twenty-one gynaecological and sixteen surgical cases were treated with radium (442 milligrammes) generously loaned to the department by the Trustees of the Granville Sharp's Estate and varying quantities were lent to twenty-one private practitioners. The Trustees decided to recall all but fifty milligrammes of this loan in May, 1938, allowing the department to retain this temporarily pending the purchase and repacking in tubes of 7.5 milligrammes of a like amount by Government. After the recall of the loan it was only possible to give palliative treatment to nine surgical cases.

229. Unfortunately, the price of radium rose from about £4. 10. 0. per milligramme to nearly £7 towards the end of the year as the result of the very considerable purchases made by the British Government. In consequence, the department will possess rather less than fifty milligrammes until funds can be released for further purchases.

230. It is hoped eventually to build up a reserve of 150-200 milligrammes when the price returns to what has been regarded in more recent years as normal, that is to say, about £4 per milligramme, and in the meantime to exploit as far as possible the new deep X-ray therapy apparatus obtained at a cost of about £5,500 in 1938.

3. Tsan Yuk Maternity Hospital.

231. The Tsan Yuk Hospital is maintained as a maternity hospital and can take sixty cases. The subjoined table gives the record for 1938.

Table XX.

In-patients.

Remaining at end of 1937	49
Admissions in 1938	2,400
Total treated	2,449
Maternity cases	2,096
Deliveries	2,272
Maternal deaths	10
Maternal death-rate per 1,000 live births	4.4
Infant deaths	88
Still-births	82

Out-patients.	New cases	Return visits	Total attendances
Ante-natal	575	489	1,064
Infant welfare	1,346	1,783	3,129
Total	1,921	2,272	4,193

4. The Infectious Diseases Hospital.

232. The building which was originally designed as a police station is scheduled to accommodate forty-two beds in six wards. The premises are unsuited for hospital wards, and the provision made for infectious diseases proved insufficient during the year under review.

233. Another important addition to hospital accommodation was made at the height of the smallpox epidemic when bed-space in the existing Infectious Diseases Hospital became quite inadequate to meet demands. Three fly-proofed wards having a capacity of forty-five to sixty beds and with the necessary offices were built in the record time of nine days under the supervision of the Public Works Department. They proved particularly useful.

234. During 1938, 848 cases of smallpox, 248 cases of cholera, 142 cases of meningitis, eight cases of chickenpox and thirteen cases of measles were treated in the Infectious Diseases Hospital. In August, owing to their large number, cholera cases were transferred to the special cholera hospital at Lai Chi Kok which has been referred to in a previous section, and were only brought back to Kennedy Town in November when the epidemic was abating.

235. With the approval of Government plans for a new 300-bed infectious diseases hospital to be erected on the Kowloon Medical Centre were drawn up during the year and there is every hope that they will meet with approval in time to enable the buildings to be opened for use in 1941.

5. Social Hygiene Centres.

236. During 1938, work was carried on at the four Government social hygiene centres, and subsidiary clinics were also maintained at Taipo and Un Long for the treatment of these diseases. The attached tables give some idea of the extent to which the public makes use of these facilities.

Table XXI.

NEW CASES TREATED IN 1938.

	Chinese		European		Indian		Others		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Queen's Road (old Government Civil Hospital)	1,081	544	2	—	—	—	—	—	1,083	544
Violet Peel Health Centre	1,199	726	266	1	125	5	12	—	1,602	732
Kowloon Docks (Tsimshatsui)	1,899	473	269	—	88	—	32	—	2,288	473
Kowloon Hospital	368	787	3	2	3	—	—	—	374	789
Taipo Centre	15	1	—	—	4	—	—	—	19	1
Un Long Centre	10	3	—	—	3	—	—	—	13	3
Total	4,572	2,534	540	3	223	5	44	—	5,379	2,542

Table XXII.

NUMBER OF ATTENDANCES IN 1938.

	Chinese		European		Indian		Others		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Queen's Road (old Government Civil Hospital)	4,838	2,211	2	—	—	—	—	—	4,840	2,211
Violet Peel Health Centre	5,371	4,492	1,245	9	1,773	32	86	—	8,475	4,533
Kowloon Docks (Tsimshatsui)	8,075	2,160	1,244	—	1,489	4	97	—	11,405	2,164
Kowloon Hospital	1,758	3,371	72	14	20	3	—	—	1,850	3,388
Taipo Centre	82	46	—	—	196	—	—	—	278	46
Un Long Centre	15	7	—	—	39	—	—	—	54	7
Total	20,139	12,287	3,063	23	3,517	39	183	—	26,902	12,349

237. Provision is made at the Queen Mary Hospital for the treatment of male cases of venereal disease, twenty beds being allotted to Asiatics and four to Europeans. Full use was made of these beds during the year under review.

238. 14,913 injections of organic arsenic and 411 injections of bismuth preparations were given to out-patients.

239. The health officer, Social Hygiene, and his assistants examined 4,941 smears for gonococci and took 12,062 specimens of blood for the Wassermann reaction. No special provision has yet been possible for the in-patient treatment of females suffering from venereal disease. There is urgent need of beds for this purpose and it is hoped that it will be possible to provide accommodation for some of these patients during the current year.

6. Dispensaries and Health Activities in the New Territories.

240. Some general information about the New Territories will be found in last year's Report.

241. An important step forward was taken during 1938 in regard to the health conditions of the New Territories. Hitherto, no legislative provision had existed affording powers to the health authorities to take action for the prevention and abatement of nuisances, the inspection of premises, the detection and isolation of cases of dangerous infectious disease, and a multitude of other public health activities. In point of fact, the only powers that did obtain related to coolie lines and anti-malarial obligations on the part of employers of labour.

242. Certain sections of the Public Health (Sanitation), Quarantine and Prevention of Diseases, and Buildings Ordinances were extended to the New Territories and approval was given by Government for the appointment of a skeleton cadre of three Chinese sanitary inspectors, three sanitary foremen and of a small body of labourers to initiate health schemes in the towns and villages in these areas.

243. Emphasis will, of course, be laid upon public health propaganda and legislative sanctions will only be employed when educational methods have failed.

244. Special problems arose during the year as the result of the advent of many tens of thousands of refugees from across the frontier. Steps had to be taken to persuade such persons to return to their homes once safety was assured or to enter camps built by Government where they could receive food, shelter, medical and welfare services.

245. Chaotic and grossly insanitary conditions came into being in and around villages and on open ground from the uncontrolled erection of rice straw hovels by the refugees. These had to be gradually eliminated. The task of cleaning up was hindered by a number of would-be charitable organisations who distributed food indiscriminately to such an extent that some persons received four meals a day whilst others received none.

246. A meeting was held early in December (after the last border incident during 1938), presided over by the colonial secretary, at which representatives of all the more important charitable bodies had the Government policy explained to them, and at which it was suggested that each organisation or group should be responsible for a defined sphere—preferably just over the Chinese border—in order to attract refugees back to their farms and villages. Thereafter, the task of the health authorities in cleaning up the very unhealthy conditions that had supervened, was considerably lightened, and the result was reflected in a diminution in the sickness ratio.

247. A description of the medical services provided in the New Territories will be found in last year's Report.

248. The additional work which had to be undertaken in connection with the refugees will be found outlined in the section of this Report entitled "Refugee relief in 1938."

Table XXIII.

	Ho Tung Welfare Centre	Sai Kung Dispensary	Tai O Dispensary	Taipo Dispensary	Un Long Dispensary	Travelling Dispensary	Ruttonjee Dispensary	Total
New cases	4,503	2,605	2,513	13,463	7,534	8,862	994	40,474
Old cases	4,760	4,190	2,055	19,444	6,350	3,411	2,591	42,804
Maternity cases	196	116	89	*112 †353	229	—	24	1,119
Malarial cases .	381	746	258	1,756	849	1,479	52	5,521
Vaccinations ...	2,371	1,474	972	5,317	4,996	2,791	398	18,319
Cholera inoculation ...	—	—	508	—	1,185	637	238	2,568
Total	12,211	9,131	6,395	40,445	21,143	17,183	4,297	118,050

* on district. † in dispensary.

249. The director of the St. John Ambulance has furnished the following details of the activities of the Brigade during the year. A total of 408,098 vaccinations were carried out by members of the Brigade, 51,305 of those vaccinated being children of 5 or under. 387,425 people were vaccinated at street centres in Hong Kong itself and 20,673 in the New Territories.

7. Chinese Hospitals and Dispensaries.

250. There are three principal Chinese hospitals in Hong Kong grouped under a charitable organisation called the Tung Wah Committee. Two are to be found on the Island, the Tung Wah Hospital built in 1873, and the Tung Wah Eastern Hospital, a much more modern institution dating from 1929. The third, the Kwong Wah Hospital, is situated in Kowloon on the mainland. These hospitals combine the functions of the poor law infirmaries which existed in London and elsewhere until recently, hospitals and alms houses; that is to say, they serve as shelters for the old and the destitute and they also treat the sick. They function, in addition, as mortuaries to which the public send their dead. Those who come to them because of illness are allowed to choose whether they will have Chinese herbalist treatment or Western treatment, and herbalists attend each day to provide Chinese treatment for those who want it. The only qualification to this statement lies in the fact that the Government Medical Department has succeeded (after encountering very considerable opposition) in getting the Chinese directors of the hospitals to agree that all cases of notifiable infectious diseases (including cholera, smallpox, cerebro-spinal meningitis, etc.) shall be treated in Western isolation wards by properly qualified medical practitioners and that accidents having medico-legal importance should be similarly treated.

251. This agreement constitutes one of the very real achievements of the Medical Committee, Tung Wah Hospitals, appointed by the Governor at the end of 1938 under the chairmanship of the writer of this Report to act as the executive in all medical matters affecting the hospitals in question.

252. To make the point clearer, it might be well to emphasise the fact that the herbalist "doctors" referred to have had no systematic training, have no belief in orthodox medicine and, with few exceptions, would be classified as quacks elsewhere. Generally speaking, their activities are such as to be a definite obstacle in the administration of the hospitals. They are tolerated still as a concession to ancient custom (and vested interests) in spite of the firm attitude taken by the Chinese National Government itself just before the present hostilities broke out in refusing to recognise so-called Eastern "medicine".

253. Lest the writer should be misunderstood, it might be well to make it clear that it is fully appreciated that Chinese medicine has made several particularly valuable contributions towards the relief of pain and suffering. Unfortunately, however, it is bound up with a vast proportion of sheer quackery.

254. The trend in the Chinese hospitals in Hong Kong is definitely towards the acceptance by a discerning public of Western rather than Eastern medicine. This is typified in the increasing number of even poor, illiterate persons who are willing to receive treatment from properly registered medical practitioners instead of from herbalists.

255. About 600 out-patients attend each day at the Tung Wah and Kwong Wah Hospitals and half that number at the Tung Wah Eastern Hospital.

256. The Tung Wah possesses 472 beds, the Tung Wah Eastern 270 and the Kwong Wah 352 making 1,094 in all three hospitals.

257. The only one not grossly overcrowded is the Tung Wah Eastern. In the other two many of the wards contain more than double the number of patients they were originally meant to hold, and it is necessary for the medical staff to pick their way carefully over prostrate forms. In many cases, it is actually difficult to approach the patient lying on his bed, such conditions militating against proper examination of cases.

258. At one time during the year under review the writer encountered sixty-six puerperal women sharing forty beds. This extremely undesirable feature could only be dealt with by bringing pressure to bear on the Chinese directors to limit admissions to the lying-in wards to the extent of one patient per bed.

259. In another instance the writer found nineteen aged and sick women sharing seven beds in a small room that could hardly be designated as being a ward.

260. In yet a third case the writer encountered sixty-one patients in a ward equipped with and large enough for twelve beds, the majority of the patients lying on the floor.

261. These instances are given, not in a critical spirit against the Chinese directors who have been solely responsible for the administration of the hospitals and who have had an extremely difficult situation to cope with, but to indicate the wisdom shown by Government in appointing in 1938 a Hospital Committee to advise on the needs of the situation and, with the consent of the Chinese directors of the hospitals, a medical committee of mixed Government medical officers and the Chinese principal directors to act as the executive body for this group of hospitals.

262. Little by little and with the willing cooperation of all concerned, it should be possible to remove this blot of public life and to provide reasonable hospital facilities for the sick poor of these territories.

263. A whole book could be written upon the subject of the Chinese hospitals in Hong Kong, but it is desirable to preserve a reasonable balance in this Report and it might be as well to end this section on a hopeful note that better times are coming for the mass of sick and needy.

264. Further details as to admissions, discharges, deaths, diseases, etc., are included in the appendix to this Report. It must be remembered that while at least a third of all in-patients in the Chinese hospitals are treated by herbalist "doctors", it would be unwise to attach much importance to the list of diseases treated.

265. The nine Chinese public dispensaries which work in the Island and Kowloon give Western medical treatment only. Their history and their functions have been chronicled in earlier reports, and only an outline of their work during 1938 is given in the appended tables.

266. 52,920 vaccinations against smallpox and 21.552 inoculations against cholera were given during the year at the Chinese hospitals.

Table XXIV.

SUMMARY OF WORK DONE IN THE CHINESE PUBLIC DISPENSARIES DURING 1938.

Dispensaries	Patients		Certificates of cause of death issued	Patients sent to hospital	Patients removed to hosp. by ambulance	Corpses removed to hosp. or mortuary	Dead infants brought to dispensary	Vaccinations	Gynaecological cases	
	New cases	Old cases							New cases	Old cases
Central	32,958	28,962	—	39	1	27	40	14,113	331	557
Eastern	22,176	30,466	4	3	5	50	305	13,454	578	988
Western	28,826	13,770	90	9	22	15	419	12,555	—	—
Shaukiwan	32,309	54,620	19	52	1	—	380	16,081	929	1,699
Aberdeen	11,327	10,407	—	85	1	—	—	5,302	358	333
Harbour & Yaumati	61,428	47,332	31	104	—	11	170	30,053	1,425	1,835
Shamshuipo	45,417	36,338	13	48	11	27	372	38,015	978	1,660
Hung Hom	17,917	6,975	61	145	1	15	245	12,567	451	533
Kowloon City	23,065	22,037	47	136	7	33	311	17,065	633	1,035
Total for 1938 ..	275,423	250,907	265	624	49	178	2,242	159,205	5,683	8,640
Total for 1937 ..	264,589	238,527	322	837	66	858	2,067	61,693	5,256	8,370

Table XXV.

WORK DONE IN GYNAECOLOGICAL CLINICS OF CHINESE PUBLIC DISPENSARIES IN 1938.

Dispensary	No. of clinics		Total number		New cases		Old cases		Average attendance per day	
	New 1937	Old 1938	1937	1938	1937	1938	1937	1938	1937	1938
Central	50	47	1,059	888	389	331	670	557	21	18.9
Eastern	43	44	1,353	1,584	503	591	850	993	31	36.0
Shaukiwan	98	96	2,252	2,628	861	929	1,391	1,699	23	27.3
Aberdeen	51	45	653	688	303	355	350	333	13	15.3
Yaumati	100	96	3,156	3,263	1,233	1,425	1,923	1,838	32	34.0
Shamshuipo	91	94	2,538	2,525	962	959	1,576	1,566	28	27.0
Hung Hom	48	48	895	963	418	430	477	533	19	20.6
Kowloon City	49	50	1,720	1,651	587	616	1,133	1,055	35	33.0
Kwong Wah Hospital	47	47	1,191	1,368	450	497	741	871	25	29.1
Total	577	567	14,817	15,558	5,706	6,133	9,111	9,425	26	27.4

Table XXVI.

In-patients.	Tung Wah	Tung Wah (Eastern)	Kwong Wah	Totals
Chinese treatment	5,695	2,055	4,745	12,495
Western treatment	13,006	6,137	17,319	36,862
Combined	18,701	8,192	22,464	49,357
Operations	1,223	699	236	2,158
Deaths in hospital	4,398	2,347	6,890	13,635
Brought in dead	1,155	670	1,966	3,791
Death-rate per 1,000 in-patients	229	286	300	275
Out-patients.				
Chinese treatment	211,438	91,700	216,321	519,459
Western treatment	22,255	22,889	32,622	77,766
Combined	233,693	114,589	248,943	597,225
Eye clinic	15,239	960	3,148	19,347
Baby clinic	1,387	—	503	1,890
Ante-natal clinic	—	—	559	559
Anti-smallpox vaccinations	31,796	13,939	7,185	52,920

8. Leper Settlement.

267. The steps taken during the year to deal with the leper problem in Hong Kong have been described earlier in this report. It is to be feared that the plans which had been made to enable lepers to be transferred to Sheklung will have to be postponed owing to the Japanese occupation of the Sheklung district.

268. 271 lepers were admitted to the former Tung Wah Infectious Diseases Hospital during the year. These premises were taken over from the Tung Wah Committee towards the end of 1938, the sum of $50,000 being paid in compensation.

269. They are dangerous and dilapidated and their early demolition is being strongly advocated before there is actual loss of life or injury. This should be practicable as soon as a new infectious diseases hospital has been built, since this will release for leper patients the premises used at present for infectious fevers.

270. In order to secure some degree of control over the inmates who came and went at will, committed theft, assaults, and so on, but were not detained in prison, steps were taken during the year to formally declare the premises a leper settlement.

271. This provided the medical authorities with power to detain lepers admitted to the settlement and to prevent them from going out into the streets and markets.

272. Plans were also approved by Government for the provision of cells for leper convicts at Hong Kong Prison. This will do away with the highly unsatisfactory system prevailing at the moment whereby a leper is convicted for theft or attempted murder, sent to prison, released from prison immediately and transferred to the leper settlement from which he escapes without difficulty to repeat once more the felony or misdemeanour for which he was originally sent to prison, and so on any number of times!

273. The following table shows the fate of the lepers admitted during 1938:—

Table XXVII.

Discharged	20
Transferred to Sheklung	72
Discharged at own request	—
Escaped	91
Died	17
Remaining at end of 1938	133
	333

VII.—PRISONS AND MENTAL HOSPITAL.

1. Prisons.

274. Hong Kong Prison at Stanley, the main prison in the Colony, has cell accommodation for 1,612 males. The female prison at Lai Chi Kok, on the mainland has accommodation for 100.

275. The total number of admissions to all prisons during 1938 was 15,046, of whom 13,045*1 were males and 2,001*2 females.

276. The prison at Stanley possesses a hospital with fifty-seven beds, six cells for isolation cases and one padded cell. Lai Chi Kok Gaol has nine beds for sick prisoners. Special wards are also available in the Queen Mary and Kowloon Hospitals.

277. The total admissions to the prison hospital during the year were 1,797, the daily average of hospital patients being forty-six. There were seventy-three deaths in 1938 among male prisoners and one among the females. Seventeen cases were transferred from Stanley during the year, eight to the Queen Mary Hospital, four to the Mental Hospital and five to the Infectious Diseases Hospital, the last suffering from smallpox. Thirty-six cases were sent to the Queen Mary Hospital for X-ray, only one of whom was detained for treatment for an intracapsular fracture of the femur. Ten prisoners were released on medical grounds, all being lepers.

278. Nine cases were transferred from Lai Chi Kok Prison to Kowloon Hospital and one to the Queen Mary Hospital. Of these cases three died. Four female prisoners were released on medical grounds, three being lepers and one suffering from pulmonary tuberculosis. There were eight normal labours during the year, as compared with fifteen in 1937.

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*1 and *2. Rather over 42,000 and 5,000 respectively in prisons in England and Wales in 1937.

279. All prisoners admitted during the year were inoculated against cholera and 12,378 were vaccinated against smallpox. Prisoners who showed signs of recent vaccination on admission and had only short sentences to serve were not vaccinated on admission.

280. The causes of death among male prisoners are shown in the subjoined table.

281. A disquieting feature associated with the Hong Kong Prison lies in the fact that, whilst cell accommodation was only 1,612 almost twice this number of prisoners had to be incarcerated at one time. With tuberculosis such a serious problem in these territories, this is a regrettable state of affairs. Government is fully alive to the situation and schemes are under consideration for the construction of detention camps in the New Territories, where short sentence prisoners (most of whom are the victims of economic conditions, as, for example, unlicensed hawkers and wood stealers) will be housed and given useful occupation.

Table XXVIII.

	No. of cases.
Chronic nephritis	1
Fibro-sarcoma of lung	1
Chronic pulmonary tuberculosis	17
Acute encephalitis	1
Strangulated hernia	1
Acute pulmonary tuberculosis	3
Tubercular enteritis	6
Generalized pulmonary tuberculosis	7
Bacillary dysentery	2
Septicaemia	2
Cerebral haemorrhage	4
Meningitis (pneumococcal)	1
Bronchiectasis	1
Myocarditis	8
Fatty degeneration of heart	1
Pulmonary infarction	1
Apical pneumonia	1
Lobar pneumonia	3
Chronic appendicitis	1
Cirrhosis of liver	2
Acute nephritis	1
Senility	2
Acute cardiac failure	2
Carcinoma	1
"Myelitis of the cord"	1
Secondary anaemia	1
	73

Table XXIX.

Prison.	Total prisoners admitted.	Daily average number of inmates.	Total admissions to hospitals.	Daily average No. of prisoners to hospital.	Total out-patients.	Daily average number of out-patients.	Deaths.	Death-rate, *i.e.* No. of deaths to total admissions to prison.
H.K. Prison, Stanley	13,045	2,342	1,797	46.47	12,651	34.66	73	0.562
Lai Chi Kok (female)	2,001	214	233	5.47	233	2.87	1	.0011

282. There are in Hong Kong, in addition to the prisons, two remand homes, one for boys and one for girls. The home for boys admitted 1,109 during the year, and 85 remained in at the end of 1938. The home is visited by a medical officer once weekly and the general standard of health was good throughout the year. 420 of the boys were inoculated against cholera and 720 vaccinated against smallpox. The commonest complaint treated in the remand home was scabies. The home for girls accommodated 311 inmates during the year. The home was visited whenever necessary by a Government lady medical officer.

2. Mental Hospital.

283. The Mental Hospital became an independent unit after the former Government Civil Hospital was closed in 1937.

284. The building was originally intended to give temporary accommodation to patients awaiting transfer to Canton, if Chinese, or to Europe or other countries if of other nationalities. Unfortunately, the Sino-Japanese conflict has greatly increased the number of admissions into the Mental Hospital, and as it has been impossible to transfer patients to Canton since its capture by the Japanese in October, 1938, the hospital has been seriously overcrowded.

285. Designed in the first place to accommodate thirty-two patients the building has on several occasions during 1938 had to house over 100 patients. The figures which are given here in tabular form illustrate the position more clearly than any words can do.

Table XXX.

	Scheduled to accommodate	Maximum number accommodated
Male European Ward	7	19
Female European Ward	7	18
Male Chinese Ward	9	61
Female Chinese Ward	9	27

286. The numbers in the first column showing the ward capacities are taken from the Report for 1935.

287. The daily average number of patients was 83 during the year under review, and the overcrowding was at its worst during the last three months of the year. This is to be accounted for by the fact that during the latter part of the year many villages were bombed from the air and many hundreds of unarmed civilians were machine gunned as they fled from their homes. Such action inevitably leaves a trail of mental disease behind and it must be stressed that sixty-five of the year's admissions gave a history which directly linked the onset of their disease to the Sino-Japanese "Incident".

288. The overcrowding which is a constant feature in the Mental Hospital does not make the treatment of war psychoses easy, and, in fact, treatment of any sort becomes very difficult in a ward holding more than six times the number of patients it was built for. The necessity for a new and properly equipped Mental Hospital becomes more pressing day by day but must take its turn with other even more urgent hospital needs.

289. In the meantime, Government has sanctioned the conversion of part of the staff quarters attached to the former Government Civil Hospital into wards suitable for the quieter type of mental patient. This will be a welcome addition and will relieve, at least temporarily, the worst of the overcrowding in the existing Mental Hospital.

290. It is to be fervently hoped that China will soon enjoy peace again, so that the normal procedure can be followed once more of transferring Chinese nationals suffering from mental disease to the Mental Hospital at Canton.

291. The attached table gives a rough classification of the conditions for which patients were admitted and treated during the year. A glance at the group entitled "General Diseases" indicates some of the difficulties with which the authorities of the Mental Hospital have to deal—particularly as no accommodation is available under the present overcrowded conditions for the observation of suspects sent in by the Police, private practitioners, the staff of the Chinese hospitals, and others. Such cases included patients who were eventually found to be suffering from widely differing conditions as cerebral abscess, cerebro-spinal meningitis, lobar pneumonia, pulmonary tuberculosis, sinus thrombosis, smallpox and typhoid fever.

Table XXXI.

Remaining from 1937	56
Admitted during 1938	424
Total	480

Discharged—cured	71	183
—relieved	62	
—not improved	52	
Transferred to Canton	149	
Died	31	
Remaining at end of year	115	

VIII.—METEOROLOGY.

292. Some notes on the climate of Hong Kong will be found in the Report of 1937. During 1938, the highest monthly average temperature—89.0°—was recorded in June and the lowest—55.7°—in February; the lowest absolute minimum 46.5° being registered in March. July was the wettest month with 12.2 inches of rain and from May to October 41.8 out of the total of 55.3 inches of rain fell. The relative humidity was highest in March when it rose to 85 and lowest in November with 67. The appended table gives further details:—

Table XXXII.

THE FOLLOWING TABLE GIVES THE MEANS, TOTALS OR EXTREMES OF THE METEOROLOGICAL DATA FOR THE SEVERAL MONTHS OF THE YEAR 1938.

Month	Barometer at M.S.L. Mean	Temperature					Humidity		Cloudiness	Sunshine	Rain	Wind	
		Absolute max	Mean max	Mean	Mean min	Absolute min	p.c.	Abs.				Direction	Velocity
	inches	°F	°F	°F	°F	°F	Rel.	inches	p.c.	hours	inches	Points	Miles p.h.
January	30.20	76.8	65.7	60.2	56.7	48.2	77	0.41	72	133.0	0.355	E/N	11.9
February	30.10	77.6	63.3	58.8	55.7	50.1	80	0.40	69	104.2	4.685	E/N	13.2
March	30.02	82.7	68.0	63.0	59.5	46.5	85	0.50	87	83.4	5.745	E/N	13.6
April	29.95	85.9	77.7	72.0	68.1	77.7	80	0.63	54	204.7	1.855	E	11.1
May	29.86	88.5	83.5	78.5	75.1	67.1	84	0.82	77	162.3	8.705	E/S	10.2
June	29.79	93.6	89.0	83.8	80.2	77.0	80	0.92	60	260.8	2.990	S/E	7.7
July	29.77	94.0	87.4	82.3	79.0	76.4	83	0.91	71	204.6	12.235	SE/S	9.6
August	29.73	90.4	87.1	81.9	78.5	75.9	84	0.91	77	158.1	7.885	SSW	6.7
September	29.83	90.7	86.3	81.6	78.5	75.0	80	0.86	70	157.1	4.265	E/N	11.5
October	29.94	88.5	82.7	77.8	73.9	66.0	76	0.73	49	233.5	6.095	E/N	8.6
November	30.11	80.5	74.2	69.4	65.7	56.9	67	0.49	60	157.0	0.530	NE/E	9.5
December	30.12	78.2	69.5	64.7	60.9	51.1	76	0.47	72	123.7	0.010	E/NE	8.8
Mean total or extreme ...	29.95	94.0	77.9	72.8	69.3	46.5	79	0.67	68	1,982.4	55.355	E	10.2

IX.—SCIENTIFIC.

A. Annual Report of the Government Bacteriological Institute.

(1) *Introductory.*

293. **Administrative.**—There is nothing to record under this heading for the current year.

294. **Buildings and equipment.**—(a) The only alteration to the existing buildings was the addition of another stall in the stable for the accommodation of an extra pony, which we hope to obtain in the near future.

(b) No addition to the permanent equipment was made during the year.

295. **Library.**—The following book was added to the library:—

"Mallory's Pathological Technique", By F. B. Mallory, 1938.

296. **General.**—The resources of our staff were strained to the utmost this year by the occurrence of a smallpox epidemic of fair proportions during the first months of the year, and a small cholera epidemic in the summer. The necessity for the production of large quantities of prophylactic preparations became urgent; nevertheless, in spite of difficulties all demands for lymph and vaccine were met. In addition to the work involved in this branch of activity, the general diagnostic service of the Institute proceeded with unabated intensity, and the volume recorded is, as in former years, greater than ever. It was found necessary to abandon one or two procedures which had been added to our routine in order to economise on the time of the staff, as well as our materials. This has meant the abandonment of clot culture for typhoid and a reversion to the use of a single medium for diphtheria diagnosis instead of the use of two different media. Permission has been obtained from Government for the addition of two more officers to our staff in 1939; this should enable us to organize our work on a somewhat more efficient basis than heretofore.

(2) *Protozoology and Helminthology.*

297. **Blood films for malaria.**—Eight thousand seven hundred and sixteen blood films were examined for the parasites of malaria. Three thousand four hundred and fifty contained parasites. The type classification is shown in the appended table.

BLOODS EXAMINED FOR MALARIA.

Table XXXIII.

	European	Indian	Chinese	Total
Sub-tertian	47	98	1,469	1,614
Benign-tertian	53	98	1,127	1,278
Quartan	—	1	137	138
Unclassified	18	54	282	354
Multiple infection	3	3	60	66
Negative	551	336	4,379	5,266
Grand total	672	590	7,454	8,716

298. **Filaria.**—Thirteen films were examined for filarial embryos and seven positives found. The infecting parasite was M. bancrofti in every instance.

299. **Faeces.**—Three thousand, six hundred and thirty-two stools were searched for parasites and the presence or absence of the typical cytological picture of bacillary dysentery. The figures shown in the table are interesting as compared with those of the previous year. Firstly, the number of positive findings is nearly three times as great. Secondly, the number of multiple infestations is similarly greatly in excess; and, finally, the number of infestations with entamoeba histolytica is similarly increased. The latter parasite can no longer be considered a rarity in Hong Kong.

EXAMINATION OF STOOLS FOR INTESTINAL PARASITES.

Table XXXIV.

	European	Indian	Chinese	Total
Ascaris	38	16	241	295
Clonorchis	6	—	237	243
Trichuris	19	5	88	112
Ankylostoma	5	19	87	111
Enterobius	4	—	1	5
E. histolytica	11	—	40	51
Fasciolopsis	—	—	11	11
Multiple infestation	4	9	231	244
Negative	530	105	1,925	2,560
Grand total	617	154	2,861	3,632

(3) Serology.

300. **The Kahn reaction.**—Seventeen thousand one hundred and eleven sera were tested. The results are shown in the table.

EXAMINATION OF BLOOD SERA FOR SYPHILIS.

Table XXXV.

	European		Indian		Chinese		Total
	M.	F.	M.	F.	M.	F.	
Strong positive	33	1	61	1	1,685	790	2,571
Positive	14	—	27	1	661	348	1,051
Weak positive	13	—	16	—	428	210	667
Doubtful	7	2	13	1	405	202	630
Negative	507	48	574	7	6,466	4,590	12,192
Grand total	574	51	691	10	9,645	6,140	17,111

301. **Agglutination tests.**—Two thousand one hundred and nine sera were examined for the presence of agglutinins against various organisms. Five hundred and nineteen were positive for one or other of the enteric group.

AGGLUTINATION TESTS.

Table XXXVI.

Organisms.	European.			Indian.			Chinese.			Total
	Pos.	Neg.	Doubtful.	Pos.	Neg.	Doubtful.	Pos.	Neg.	Doubtful.	
Bact. typhosum	12	88	8	5	13	1	413	1,417	58	2,091
Bact. typhosum A.	1	99	8	—	18	1	1	1,829	58	
Bact. typhosum B.	3	97	8	—	18	1	8	1,822	58	
Enteric fever type undetermined	6	—	—	—	—	—	70	—	—	
B. melitensis	—	1	—	—	—	—	—	2	—	3
B. abortus	—	—	—	—	—	—	—	2	—	2
Weil Felix reaction	2	2	—	—	—	—	3	6	—	13
Total for each race	119			19			1,971			2,109

(4) Bacteriological Examinations.

302. **Faeces.**—Four thousand one hundred and thirty nine stools were cultured for pathogenic organisms. A good proportion of these were from cholera cases or suspects.

STOOLS EXAMINED FOR ORGANISMS.

Table XXXVII.

Organisms.	European		Indian		Chinese		Total
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	
Bact. typhosum	2	5	—	—	3	153	163
B. dysenteriae (group)	—	341	—	68	—	1,439	1,848
Cytology typical of B. dysenteriae	27	—	10	—	706	—	743
B. dysenteriae (Flexner)	20	—	—	—	25	—	45
B. dysenteriae (Shiga) ..	1	—	—	—	—	—	1
B. dysenteriae (Schmitz)	2	—	—	—	3	—	5
V. cholerae	8	34	1	5	557	729	1,334
Grand total	60	380	11	73	1,294	2,321	4,139

303. **Sputum:**—Eight hundred and twenty-two sputa were examined for the presence of the tubercle bacillus.

SPUTA EXAMINED FOR TUBERCULOSIS.

Table XXXVIII.

	European	Indian	Chinese	Total
Positive	22	6	204	232
Negative	91	36	463	590
Grand total	113	42	667	822

304. **Urine:**—Two hundred and sixty-five cultural examinations were made for infective organisms.

305. **Urethral and cervical smears:**—One thousand one hundred and fifteen urethral and cervical smears were examined for the presence of the gonococcus.

306. **Nasal and other scrapings for M. leprae:**—One hundred and seventy-eight examinations were carried out for the detection of this organism. Sixty-three positive results were recorded.

307. **Throat swabs:**—One thousand six hundred and twelve throat swabs were cultured for C. diphtheriae. The number of positives is only slightly greater than recorded last year.

THROAT SWABS EXAMINED FOR DIPHTHERIA.

Table XXXIX.

	European	Indian	Chinese	Total
Positive	79	—	277	356
Negative	430	8	818	1,256
Grand total	509	8	1,095	1,612

308. **Cerebro-spinal fluid:**—One thousand two hundred and eight fluids were examined for the presence of the meningococcus and other pathogenic organisms. While a proportion of these represent repeated examinations, the enormous increase over the previous year's figures is noteworthy.

CEREBRO-SPINAL FLUID EXAMINED FOR MENINGOCOCCI AND OTHER ORGANISMS.

Table XL.

	European	Indian	Chinese	Total
Meningococcus	—	—	332	332
Pneumococcus	—	—	36	36
Negative	5	3	832	840
Grand total	5	3	1,200	1,208

309. **Rat spleen smears.**—Two hundred and fifty-two rat spleens were smeared and stained for P. pestis. No positive findings are recorded.

(5) *Clinical Pathological Procedures.*

310. **Friedmann test for pregnancy.**—Thirty-three Friedmann tests were performed during the year. The test is evidently becoming a familiar and valuable instrument in the physician's diagnostic armamentarium. In 1937 we recorded only five tests.

311. **Urine examinations.**—Five hundred and one routine chemical and microscopic examinations of urine were carried out.

312. **Miscellaneous tests.**—Three hundred and five tests of a miscellaneous nature were made.

(6) *Preparation of Vaccine Lymph.*

313. In the Report of last year reference to the preparation of lymph was made to the effect that this was "much accelerated"; it will be seen that the large amount referred to in 1937 has been more than doubled in the year under review. The amount issued is also more than double that of the previous year.

314. The output of this large amount of lymph involved the issue of freshly prepared or "green" lymph, and this in turn required some special method of treatment in order that the bacterial content should be within the limits imposed by the "Therapeutic Substances Act". Fortunately, some experimental work on this point had been in progress for the past two years at the Institute and we were able to put our results to practical use at a time when they were badly needed.

315. The method used is briefly as follows:

The preparation of the lymph is carried to completion in the usual manner. Anaesthetic ether, 2 per centum by volume, is then added, and the container vigorously shaken so as to mix the contents intimately. The lymph is then stored at refrigerator temperature for a period of not less than twelve days or more than two weeks. At the expiration of this time bacteriological and potency tests are carried out as usual. If these tests prove satisfactory, air is bubbled through the lymph for about twenty minutes in order to remove the ether; the lymph is then ready for use.

316. The bacterial colony count will be found invariably to be well within the prescribed limits and the potency quite unimpaired. By the use of this method of purification we were enabled on occasions to issue lymph no older than three weeks with perfectly satisfactory results.

Table XLI.

Amount of lymph prepared	59,562 c.c.
,, ,, ,, issued	45,194 c.c.
,, ,, ,, in stock at end of year	32,845 c.c.
No. of buffalo calves scraped for pulp	65
Total pulp collected	13,040 g.
Average per buffalo calf	200.6 g.
No. of cow calves scraped	1
,, ,, sheep scraped	5
Total pulp collected	241.0 g.
Average per sheep or cow calf	40.16 g.

317. The small yield obtained from cow-calves and sheep is a point worthy of note. The average yield per buffalo-calf, on the other hand, is a record for this Institute. All other figures given also exceed any previously reported; and it should be emphasized that this enormous quantity of lymph was made and distributed by the same staff and equipment as in previous years.

(7) *Preparation of Vaccines and Sera.*

318. **Antimeningococcus serum.**—The issue this year was exceptionally large, 48,780 c.c.; an amount actually in excess of the quantity held in stock at the end of 1937. The amount prepared was 17,900 c.c. It is obvious that the supply will have to be augmented by purchase during the coming year. It is impossible to produce more than we are doing from three ponies and keep them in good health under the unsuitable conditions in which they live.

Gonococcus vaccine.—

319.—The total amount issued was 12,280 c.c. made up 98,570 c.c. at 1,000 million per c.c. and 3,710 c.c. at 100 million per c.c.

320. **Autogenous vaccines.**—Eighteen autogenous vaccines were prepared during the year.

321. **Cholera vaccine.**—The presence of cholera again this year required the production of large quantities of cholera vaccine. This was prepared from strains isolated in the early summer from local cases. A sufficient supply was accumulated to take care of the requirements of next summer. In point of fact, 215,000 c.c. were prepared of which 20,140 were issued.

322. **Anti-rabic vaccine.**—Twelve animal brains were examined for rabies. Only one dog was found to be rabid. The table showing the distribution of the treatments given shows a large increase in the number of treatments completed, a gratifying point.

Table XLII.

Nationality	Treatment not completed	Treatment completed	Total
American	1	—	1
Belgian	1	—	1
British	16	25	41
Chinese	108	55	163
Indian	—	2	2
Japanese	—	1	1
Malayan	1	—	1
Outport	—	9	9
Portuguese	3	3	6
Grand total	130	95	225

Total number of doses issued 2066

(8) Examination of water and milk.

323. **Bacteriological analysis of water.**—One thousand five hundred and twenty-one samples of water from various sources, chiefly public supplies, were examined.

Table XLIII.

Unfiltered raw water	124
Filtered raw water	159
Filtered and chlorinated water from service taps throughout the Colony	1,209
Well water	7
Water from other than public supplies	22
Total	1,521

324. **Bacteriological analysis of milk.**—One hundred and thirty-three analyses of milk were performed, chiefly at the instance of the health division.

(9) Medico-legal investigations.

325. Eighty-one investigations were carried out on materials furnished by the Police.

The character of the materials was as follows:

blood stains 34, seminal stains 40, miscellaneous 7.

(10) Morbid Histology.

326. Three hundred and eighty-one sections of tissues were prepared and examined histologically. Fifty-two were from malignant growths and fifty-eight from benign. One hundred and fifty seven were of clinical-pathological interest, and the remainder, one hundred and fourteen, were from post-mortem cases.

ANALYSIS OF CLINICAL AND OTHER EXAMINATIONS.

Table XLIV.

	Nature of examination.	Total for 1937.	Total for 1938.
Agglutination reaction	Bact. typhosum ,, paratyphosum A ,, ,, B	1,539	2,091
	Weil Felix reaction	4	13
	B. dysenteriae	—	—
	B. melitensis	2	3
	B. abortus	1	2
Serological reaction for syphilis		16,581	17,111
Blood smears	Malaria	8,917	8,716
	Filaria	30	13
	Blood count, etc.	77	51
Cultural examinations	Naso-pharyngeal swabs (C. diphtheriae)	1,454	1,612
	Spinal fluid (Meningococcus)	232	1,208
	Faeces (typhosus, paratyphosus, cholera, etc.)	3,758	4,139
	Blood	1,478	569
	Urine	136	265
Faeces	Intestinal parasites	2,407	3,632
	Occult blood	28	58
	Tubercle bacillus	10	14
Tissue Sections		274	381
Friedmann test for pregnancy		5	33
Miscellaneous examinations	Sputa	687	822
	Pus	90	110
	Urine	293	501
	Smear for gonococcus	617	1,115
	,, ,, M. leprae	154	178
	Animals for rabies	29	12
Medico-legal examinations		80	81
Bacteriological examination of milk		127	133
,, analysis of water		1,538	1,521
Rideal-Walker test of disinfectants		—	6
Autogenous vaccine prepared		20	18
Miscellaneous		1,523	302
Total		42,096	44,710

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Government Bacteriologist.

B. Annual Report of the Malaria Bureau, 1938.

327. Dr. R. B. Jackson, O.B.E. left the Colony prior to retirement on 13th September, and Dr. J. B. Mackie took over his duties.

328. The present report deals entirely with new work done by the Malaria Bureau during the year 1938, and makes no reference to previous research or the extensive routine antimalarial work. These can be found by those interested in the Annual Reports of 1930-1936.

329. **Deaths ascribed to malaria** were 733, or 1.9 per centum of deaths registered from all causes. The corresponding figures for 1937 were 699 and 2 per centum respectively.

330. **Incidence of malaria in the Colony.** In areas outside of the control of the Bureau, namely in the New Territories and at the Lyemun Barracks, there was a general increase in malaria above the normal autumnal rise. This was attributable to :—

(*a*) a low rainfall resulting in insufficient flushing of the streams,

(*b*) a slight persistent rainfall well into October insufficient to flush the streams, but enough to keep open seepages and swamps, and

(*c*) the influx of a large number of refugees from malarious rural districts in Kwangtung, whose resistence had been lowered by undernourishment, fatigue, and exposure.

331. There was increase in malaria amongst the troops, but this mainly occurred amongst those posted on the frontier during the Japanese invasion of Kwangtung. In the barracks at Lyemun there were a number of cases. The Army Authorities have, however, increased the scope of their antimalarial operations, and it is hoped that this will prevent a recurrence in 1939. The Police stationed in the New Territories shared in the general increase in malaria.

332. Disturbance of soil has not been found to be a factor of any great consequence in increasing the number of breeding places of the important anophelines.

333. Night catching was discontinued in 1938, as inspectors previously working in the Laboratory were needed for field work under the expansion of the antimalarial programme. One inspector only was retained in the Laboratory.

334. No new species were discovered in 1938. Identification of the species found gave the following results:—

A. minimus, A. jeyporiensis var. candidiensis, A. maculatus, A. hyrcanus var. sinensis, A. fluviatilis, A. aitkenii var. bengalensis, A. splendidus, A. karwari and **A. vagus.**

335. The first two species are responsible for serving as vectors in the major number of cases of malaria that occur.

336. Catching at Pat Heung was discontinued in September, 1938, due to the taking over of the Camp for refugees.

337. It is noteworthy that the catches of adult mosquitos at several stations were found to be far less numerous than those of preceding years owing to preventive work done.

338. Antimalarial measures were carried out in many areas on the Island and mainland during 1938, and particular attention was given to the following amongst other places:—

(a) Work at the Shing Mun Dam was discontinued as the Camp was closed in 1937.

(b) A new area was opened up in May, 1938, at Lai Chi Kok for the protection of the Prison and the Cholera Hospital. Excellent results have been obtained. Control has been obtained as far as Sham Shui Po Barracks in the East and the Torpedo Boat Range in the West.

(c) Temporary measures formerly carried out by the Royal Air Force and supervised by the Bureau at Kai Tak and Pat Heung were entirely taken over by the Bureau on the 1st of October and the 1st of November.

(d) Extension of work in the existing areas under the control of the Bureau was carried out at North Point, Repulse Bay, Aberdeen, Queen Mary Hospital, Felix Villas, Kowloon Tong, Kai Tak and Lai Chi Kok. In these areas control was obtained over some additional 8,330 yards of stream drainage.

(e) Permanent antimalarial drainage was carried out by the training of 1,603 feet of stream channels at Aberdeen and 5,000 feet at Queen Mary Hospital site. In Kowloon 900 feet of stream training was done and 2,660 feet of subsoil drains were laid.

(f) An experimental flushing tank based on the design of De Villiers was erected at Mount Cameron. This worked admirably with the wet weather flow of water, but more work is needed to determine the suitability of having only one tank on account of the marked seasonal variation of rainfall which occurs in the Colony as compared with Malaya where the rainfall is spread more evenly over the year. It may prove necessary to have tanks with a different siphonage area for different flows of water.

(g) By the kind co-operation of the commissioner of prisons, prison labour was employed for the first time in Hong Kong outside the prison in training streams in the Stanley area under the supervision of the Malaria Bureau.

339. Mosquito nuisances were investigated at:—

(a) Barker Road, (b) Mount Cameron Road, (c) The Peak, (d) May Road, (e) Mount Davis, (f) Middle Island, (g) South Bay Island, (h) Cape Collinson, (i) Coombe Road, (j) Ming Yuen, (k) Prince Edward Road, (l) Kadoorie Avenue, (m) Cornwall Street, (n) Kent Road, (o) Minden Avenue, (p) Water Police Station, (q) Whampoa Dock Quarters, (r) Railway Quarters, Hunghom.

340. **Teaching of Mosquitology.**

(a) Demonstrations in collecting mosquito larvae and adults and instruction in the elements of malaria prevention were given to classes of Royal Army Medical Corps men.

(b) Classes for medical students of the Hong Kong University were held and demonstrations of antimalarial field work given.

(c) Lectures to probationer sanitary inspectors on mosquitology and prevention of malaria were delivered, and demonstrations on field work given.

341. **Flushing Tank.**

De Villiers flushing tank—construction of which was commenced during 1937, was completed during the year.

342. Four tables are appended. The first gives details of 6,750 anopheline larvae examined microscopically for identification purposes, the second relates to some 1,409 adults hatched out from larvae and pupae, the third summarises the results of precipitin tests on bloods from mosquitos caught in three types of shelters in the village of Kap Lung; while the fourth gives a summary of systematic catches and dissections to ascertain the presence of malarial infection of anophelines caught at Pat Heung Camp from the month of January to August, 1938, in two screened lines. In addition, catching was also done in villages outside the half-mile area around these lines. Of 1,094 anophelines obtained approximately 48 per centum were **A. minimus,** 27 per centum **A. hyrcanus,** 19 per centum **A. jeyporiensis,** 3½ per centum **A. vagus,** 1 per centum **A. fluviatilis.**

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Government Malariologist.

Table XLV.

ANOPHELINE LARVAE EXAMINED MICROSCOPICALLY.

Month.	A. maculatus.	A. minimus.	A. hyrcanus var. sinensis	A. jeyporiensis var. candidiensis.	A. karwari.	A. aitkenii var. bengalensis.	A. splendidus.	Totals.
January ..	887	140	149	—	—	—	—	1,176
February ..	246	268	87	21	—	2	—	624
March	112	127	16	—	—	—	—	255
April	36	149	50	24	—	—	14	273
May	71	—	52	—	—	—	54	177
June	37	3	81	—	—	—	61	182
July	90	91	37	106	—	—	—	324
August ...	8	—	—	—	—	—	—	8
September	566	301	55	—	6	—	128	1,056
October ...	198	76	—	—	18	—	—	292
November	277	248	11	51	—	—	—	587
December	929	615	151	—	—	—	101	1,796
Totals	3,457	2,018	689	202	24	2	358	6,750

Table XLVI.

ADULT MOSQUITOS HATCHED OUT FROM LARVAE & PUPAE.

Month.	A. maculatus.	A. minimus.	A. hyrcanus. var. sinensis.	A. jey-poriensis. var. candidiensis.	A. karwari.	A. splendidus.	Totals.
January	72	95	—	—	—	—	167
February	85	30	27	10	—	—	152
March	52	107	3	—	—	—	162
April	22	89	19	7	—	6	143
May	2	—	7	2	—	26	37
June	16	—	6	—	—	—	22
July	45	23	14	26	—	—	108
August	2	—	—	—	—	—	2
September	68	42	12	—	—	6	128
October	107	29	—	—	7	17	160
November	25	9	—	—	—	—	34
December	151	97	22	8	—	16	294
Totals	647	521	110	53	7	71	1,409

Table XLVII.

RESULTS OF PRECIPITIN TESTS ON BLOODS TAKEN FROM ANOPHELINES CAUGHT IN ANIMAL & HUMAN DWELLING, COW HOUSE AND PIGSTIES IN THE VILLAGES OF KAP LUNG, PAT HEUNG, NEW TERRITORIES.

Species	No. tested	No. without positive reactions	No. with positive reactions	Reactions positive to the serum of					
				Man	Dog	Pig	Cow	Goat	Mixed
			Animal & Human Dwelling.						
A. minimus	104	6	98	9	1	1	86	—	1 (man & cow)
A. jeyporiensis	164	5	159	18	—	2	136	—	1 (cow & goat) 1 (man & goat) 1 (cow & pig)
A. maculatus	2	—	2	—	—	—	2	—	—
A. hyrcanus	3	—	3	—	—	—	3	—	—
			Cow House.						
A. minimus	81	3	78	4	—	1	72	—	1 (man & cow)
A. jeyporiensis	139	4	135	8	1	—	124	1	1 (goat & cow)
A. maculatus	12	1	11	—	—	—	11	—	—
A. hyrcanus	21	—	21	1	—	—	19	—	1 (dog & cow)
			Pigsties.						
A. minimus	2	—	2	—	—	2	—	—	—
A. jeyporiensis	—	—	—	—	—	—	—	—	—
A. maculatus	—	—	—	—	—	—	—	—	—
A. hyrcanus	—	—	—	—	—	—	—	—	—

N.B.—Animal & human dwelling: 3 adults, 3 children, 2 cows, & 9 pigs.
Cow house ....: 2 cows only.
Pigsties ....: 3 pigs only.

Table XLVIII.

RESULTS OF CATCHES & DISSECTIONS FOR MALARIA INFECTION OF ANOPHELINES CAUGHT AT COOLIE LINES, PAT HEUNG, DURING THE YEAR 1938.

Month	Species	No. caught	No. dissected	No. with infected glands only	No. with infected midgut only	No. with infected glands & midgut	Percentage of infection
January ..	A. minimus	19	19	—	—	—	—
	A. jeyporiensis	2	2	—	—	—	—
	A. maculatus	—	—	—	—	—	—
	A. hyrcanus	5	5	—	—	—	—
	A. fluviatilis	—	—	—	—	—	—
February .	A. minimus	11	11	—	—	—	—
	A. jeyporiensis	2	1	—	—	—	—
	A. maculatus	—	—	—	—	—	—
	A. hyrcanus	4	4	—	—	—	—
	A. fluviatilis	1	1	—	—	—	—
March	A. minimus	17	17	—	—	—	—
	A. jeyporiensis	3	3	—	—	—	—
	A. maculatus	—	—	—	—	—	—
	A. hyrcanus	27	27	—	—	—	—
	A. fluviatilis	—	—	—	—	—	—
April	A. minimus	2	2	—	—	—	—
	A. jeyporiensis	2	1	—	—	—	—
	A. maculatus	—	—	—	—	—	—
	A. hyrcanus	9	9	—	—	—	—
	A. fluviatilis	—	—	—	—	—	—
May	A. minimus	9	—	—	—	—	—
	A. jeyporiensis	2	—	—	—	—	—
	A. maculatus	—	—	—	—	—	—
	A. hyrcanus	156	46	—	—	—	—
	A. fluviatilis	—	—	—	—	—	—
June	A. minimus	7	—	—	—	—	—
	A. jeyporiensis	8	—	—	—	—	—
	A. maculatus	—	—	—	—	—	—
	A. hyrcanus	134	74	—	—	—	—
	A. fluviatilis	—	—	—	—	—	—
July	A. minimus	11	3	—	—	—	—
	A. jeyporiensis	10	2	—	—	—	—
	A. maculatus	—	—	—	—	—	—
	A. hyrcanus	49	28	—	—	—	—
	A. fluviatilis	—	—	—	—	—	—
August ...	A. minimus	30	12	—	—	—	—
	A. jeyporiensis	14	8	—	—	—	—
	A. maculatus	—	—	—	—	—	—
	A. hyrcanus	56	39	—	—	—	—
	A. fluviatilis	—	—	—	—	—	—
Totals	A. minimus	106	64	—	—	—	—
	A. jeyporiensis	44	17	—	—	—	—
	A. maculatus	—	—	—	—	—	—
	A. hyrcanus	440	232	—	—	—	—
	A. fluviatilis	1	1	—	—	—	—

C. Annual Report of the Government Analytical Laboratory, 1938.

343. The work of the Hong Kong Government Laboratory differs from that usually associated with a sub-department of this type in that a very considerable amount of work, usually done by consulting analysts, is carried out here, and for which fees are paid into the Treasury. This non-government work comes under two heads.

(a) Analyses of stores, etc., for the Naval, Military, and Air Force Authorities, described below as semi-official work and for which, in the majority of cases, full fees are now charged.

(b) Analyses carried out for local firms and individuals in the Colony: the majority of which are the testing of exports of China produce, e.g., tin and oils, and for which full fees are charged.

344. The following tables show the nature of the work under the various heads.

OFFICIAL WORK.

Official work—i.e., Government work.

Table XLIX.

	1937	1938
Chemico-legal samples, from the Police and Medical Departments	351	358
Food and drugs samples under the Ordinance from the Sanitary Department	337	294
Water samples, from public supplies	1,834	2,198
Dangerous goods under the Ordinance, from the Police Department and Fire Brigade	3	5
Bio-chemical examinations, from the Medical Department and University	287	374
Materials from various departments for testing:—		
Oils from Public Works Department	9	4
Coals from Public Works Department, Harbour Department and Kowloon-Canton Railway	235	215
Building materials from Public Works Department	8	0
Foodstuffs from Medical Department, Police Department, etc.	74	138
Pharmaceutical samples from Government Apothecary	18	20
Chemicals from Medical Department, Public Works Department, etc.	16	34
Battery acids from Public Works Department	1	6
Minerals and metals	11	10
Septic tank effluents	27	0
Harbour waters	26	0
Miscellaneous samples	37	23
	3,274	3,679

345. The value of work done for Government departments, as determined under the Tariff of Charges (Government Notification No. 510 of 1938), was $59,114.00 as against $60,525.00 for 1937.

346. A considerable amount of the official work comes under the heading of "chemico-legal". Practically the whole time of the Government Analyst is spent on this work, and during the year under review, both Assistant Analysts had to give assistance on many occasions and to give evidence in several enquiries. Members of the laboratory staff attended court on twenty-one occasions during the year.

Chemico-Legal Samples.

347. The following table shows the nature of the work done under this head.

Table L.

	1937	1938
Toxicological examinations (including post-mortem materials from seventy persons in 1937 and fifty-four in 1938)	236	177
Counterfeit coins and materials	11	54
Forged notes and materials	0	32
Bombs and explosives	19	19
Articles for stain	18	18
,, ,, fire enquiries	3	4
,, connected with larceny	2	0
,, ,, ,, murder	0	10
,, ,, ,, forgery	29	0
,, ,, ,, attempted murder	0	3
,, ,, ,, armed robbery	0	3
,, ,, ,, robbery with violence	20	27
Dangerous goods	3	0
Other examinations (including estimation of alcohol in urine in nine cases in 1937 and nine cases in 1938)	10	11

348. Investigations were carried out in connection with two explosive fires which occurred at the General Post Office. The final conclusion arrived at was that these were not due to any infernal machine; but were caused by packages of sodium or sodium peroxide becoming damp and igniting combustible matter, with consequent showers of burning sodium or incandescent peroxide.

349. Shortly after these fires, one occurred in the mail on a steamer. It appeared, however, that this had no connection with the former cases but was due rather to accidental ignition, as the ship was carrying a very large number of deck passengers who cooked and smoked near the hold containing the mail. An examination of parts of a shell found on a junk was also carried out.

350. Exhibits in connection with eight cases of robbery with violence were examined, in which use was made of pepper for temporarily blinding the victims.

351. Corrosive fluid throwing again occurred on several occasions during the year, in one case, concentrated caustic soda was used instead of the usual mineral acid.

TOXICOLOGICAL EXAMINATIONS.

Table LI.

Nature of poison.	*No. of samples.*
No poison found	57
Opium (2 morphine)	41
Phenolic or cresolic compounds	31
Adalin	3
Carbon monoxide	6
Lead	4
Barbituric acid derivative	1
Alcoholic solution of iodine	2
Kai Po Yu	3
Turpentine and camphor	1
Crude sodium bisulphate	1
Santalol	1
Iodoform	1
Crude alkaloids of Gelsemium elegans Benth	8
Arsenic derivative	2
Strychnine	1
Sodium carbonate	1
Nerium oleander	2
Aluminium sulphate	1
Luminal	2
Mixture of aspirin, phenacetin and caffeine	1
Unknown synthetic drugs	3
Aspirin	2
Jatropha curcas Linn. (Physic Nut)	2
Total	177

352. Suicide again accounted for the majority of the deaths. Opium is still the most common agent, but again a large number of cases of the use of poisons of the lysol type is to be reported.

353. Several unusual cases occurred. In one a child fell into a kerosene tank and was killed. His stomach was found to contain oil similar to that in the tank. Unusual substances used for attempted suicide were an alcoholic solution of iodine, iodoform, and camphor liniment respectively.

354. Gelsemium elegans Benth was again used on several occasions for suicidal purposes, with fatal results. The increased use of this herb for suicidal purposes has resulted in discussions on the possibilities of restricting its cultivation.

355. The consumption of Kai Po Yu, a poisonous fish, caused serious illness in six cases. It was again found impossible to identify any poisonous constituent by chemical means.

356. Nerium oleander, containing a glucoside of the digitalis type, was also the cause of one death by suicide.

357. In the case of the death of a child by an overdose of atropine sulphate administered hypodermically, no trace of the alkaloid could be detected either chemically or physiologically in the post-mortem materials.

358. In one case in which the administration of a stupefacient drug in coffee was suspected, investigation showed that a large dose of calomel only had been used.

359. A sample of Chinese foodstuff submitted from Swabue (Kwangtung) proved to contain over 2 grains of arsenic per pound weight which had probably been derived from some Chinese herbs used in the foodstuff. These contained small amounts of arsenic and had been purchased in a Chinese medicine shop.

360. In one case, opium was administered to a child with fatal results.

361. The seeds of Jatropha curcas Linn which are similar to castor and croton seeds, were eaten by a party of walkers with distressing results, happily not fatal.

362. Lead was found in excess in the urine of several employees of factories where soldering is carried out.

363. An investigation of a case of suspected poisoning by preserved eggs showed that the egg shells contained a large amount of aluminium. It is possible that alum or aluminium sulphate had been used as a preservative, although it is doubtful if this could have caused the symptoms noted.

Food and Drugs.

364. No large increase in this work is to be reported. Details of samples of foodstuffs analysed have been included in the section on "Food in relation to health and disease" and will, therefore, be omitted from this section.

Water and Sewage Samples.

365. Routine analyses of the public supplies were carried out during the year. Investigation of the swimming baths of the Colony was carried out and advice on the best method of chlorination, etc., given. The work was done in order to prevent the baths from being a possible cause of the spread of cholera. Samples from many water boats were tested for possible contamination with harbour water and in a few cases this was found to have occurred.

Bio-chemical Examinations

366. The biochemical branch of the laboratory has been reorganised and the scope of the examinations largely increased, consequent on the appointment of Mr. P. H. Symons, who has many years experience of this work.

Table LII.

Blood for blood urea nitrogen	116 samples.
,, ,, ,, sugar	92 ,,
,, ,, ,, urea nitrogen and sugar	6 ,,
,, ,, ,, sodium chloride	1 ,,
Calculi	14 ,,
Faeces	18 ,,
Human milk	3 ,,
Urine	30 ,,
Gastric contents	91 ,,
Bile	1 ,,

Materials from Government Departments for testing.

367. In order to determine the price to be paid to the contractors, routine tests were carried out of all consignments of coal supplied to Government. Apart from this work, very little testing of Government stores was undertaken by the laboratory.

368. Fumigation of books by means of hydrocyanic acid gas was again carried out in several Government buildings.

369. Routine examinations of ghee and atta supplied to the Police Department were continued, and have acted as a useful safeguard against possible adulteration.

370. Work was carried out in connection with the feeding of children at the Violet Peel Health Centre and analyses were made of soya beans, soya bean milk and various allied products used for infant feeding.

Semi-official and Unofficial Works.

371. Semi-official work—i.e., work for the Naval, Military, and Air Force Authorities.

Unofficial work—i.e., work for local firms, etc.

Table LIII.

	Semi-official work, 1938	Unofficial work, 1938
Examination of steamer tanks for inflammable vapour	7	25
Foodstuffs and fertilizers	11	39
Oils (fuel, kerosene and petrol)	57	125
Battery acids	29	—
Building materials	6	5
Water samples	1	9
Chemicals	11	2
Minerals and metals	4	289
Miscellaneous	4	21
Bio-chemical examinations	—	2
Toxicological examinations	—	8
Dangerous goods	—	4
Pharmaceutical samples	—	4
Total	130	533
Value of work done	$2,957.50	$27,637.50

372. Many analyses of lubricating oils from submarines were carried out in connection with corrosion of cylinder linings.

373. Unusual investigations under the head of unofficial work were:—

The estimation of the amount of (a) lead in locally made Chinese wine and (b) tannic acid in beer.

Sampling.

374. The following list gives the amount of sampling done by the Sampler attached to the laboratory.

Table LIV.

	1937.	1938.
Tin	4,315½ tons	3,751 tons
Lard	140,436 cases	43,203 cases
Wolfram Ore	—	15 tons
Wood Oil	60 tons	—
Cassia Oil	15 drums	30 drums
Firecrackers	4,076 cases	1,699 cases
Teaseed Oil	40 tons	—
Water Samples	1,702 samples	2,010 samples

Special Investigations.

375. With the arrival of Mr. Symons in May, thus bringing the staff up to establishment, it has been possible to initiate several investigations. Determinations of the freezing points of locally produced milk are being carried out. Work in connection with the estimation of tin and arsenic in wolfram ore is proceeding.

Staff and Equipment.

376. Mr. P. H. Symons joined the laboratory staff on May 8th. Three small fume cupboards have been converted into one large one, and forced draught provided. It is now possible to carry out all work involving the emission of corrosive fumes without discomfort to the staff or danger to delicate apparatus.

Revenue.

377. The fees paid into the Treasury during the year amounted to $30,085.00 as against $39,307.00 in 1937. The value of the work done both Government and commercial, as determined from the Tariff of Charges (Government Notification No. 510 of 1938) was $89,709.00 as against $100,478.50 in 1937.

Expenditure for 1937 and 1938 compared.

Table LV.

	1937.	1938.
Personal emoluments	$47,665.60	$52,450.25
Other charges:—		
Apparatus and chemicals	3,959.47	4,113.19
Books and journals	316.49	369.24
Conveyance allowance	180.00	166.27
Fuel and light	1,227.75	1,299.47
Incidental expenses	280.28	311.39
Uniforms	76.36	99.14
Total other charges	$6,040.35	
Special expenditure (Revote)		278.25
	Total other charges	$6,358.70

V. C. Branson,
M.C., A.R.C.S., D.I.C., B.SC., F.I.C.

D. Report of the University Professorial Units.

UNIVERSITY CLINICAL UNITS AT THE QUEEN MARY HOSPITAL.

Medical Unit—Report by the Professor of Medicine.

STAFF.

William I. Gerrard, O.B.E., M.D., Ch.B., F.R.C.P., D.P.H.

First Assistant to Professor
P. P. Chiu, M.B., B.S.

Second Assistant to Professor
H. T. Wu, M.B., B.S.

House Physician
January to June—W. Heng, M.B., B.S.
July to December—W. W. Yeung, M.B., B.S.

Clinical Assistants
January to June—W. W. Yeung, M.B., B.S.
July to December—C. G. Foo, M.B., B.S.

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378. Cases treated as In-patients in the University Teaching Medical Wards:—

Men	253
Women	200
Children under 12 years old	109
Total	562

Number of cases died during the year = 63.

379. Cases treated as out-patients at the University Medical Out-patient Clinics:—

1. **Afternoon Clinic** (General Medical Cases)
   Mondays and Thursdays:
   2,024 new cases, seen and treated (1,665 adults and 359 children): many of these cases attended more than once, bringing to a total of 7,609 attendances.

2. **Children's Clinic**
   Thursday mornings:
   270 new cases, seen and treated: many of these cases attended more than once, bringing to a total of 1,349 attendances.

380. The total number of cases seen and treated by the Medical Unit at Out-patients Department both general and children during the year 1938 was 8,958 (this figure included old and new cases, men, women and children).

381. The following special tests have been carried out:
(From January to December, 1938)

Table LVI.

Blood urea	34
Blood sugar	9
Blood sedimentation rate	291
Fractional test meal	95
Histamine test meal	5
Urea clearance test	5

REMARKS:

Adult In-patients and Out-patients.

Cerebro-spinal meningitis :

382. A small number of cases were treated and reference to special methods is made under "Special Investigations."

Fewer cases were seen in the out-patient department. Most cases of this disease were sent to Infectious Diseases Hospital, Kennedy Town, which was kept open throughout the year.

Tuberculosis :

383. Pulmonary infection makes up the great mass of admissions and of those attending the out-patient department = 330 cases.

Malaria :

384. The three common types of infection especially S.T. maintain a fairly high figure in both in-patient and out-patient department.

Metazoan infections :

385. Ankylostomiasis, ascariasis and clonorchiasis have a high incidence.

Anterior poliomyelitis :

386. 3 cases only admitted and 2 seen in out-patient department.

The low figures are interesting in view of the fact that in Japan and North China there has been a high incidence comparatively recently.

Diabetes mellitus :

387. Met with frequently in the out-patient department.

Beri-beri :

388. 42 cases were admitted referred to under "Special Investigations"—106 were seen in the out-patient department.

Duodenal and gastric ulcer :

389. Fewer cases were admitted than last year but the incidence of gastric disease in the out-patient department was high.

Constipation :

390. Incidence in out-patient department is very high—opium addiction is a causation in some only. This persistent constipation is the cause of much general ill-health. It is not rare to meet with cases of female patients whose bowels move once in 6 or 7 days.

Respiratory diseases :

391. Incidence is high in the out-patient department especially broncho-pneumonia and bronchitis.

Nephritis :

392. The sub-acute type is very prevalent. Etiology remains obscure although many cases have an antecedent history of malaria.

Purpura—thrombocytopenic :

393. One case was admitted and showed a positive Peck test with snake venom. The total thrombocytes per cmm. fell progressively to 5,000 per cmm.

Treatment by blood transfusion and snake venom (Moccasin) proved of no avail although bleeding was controlled. No increase in thrombocytes was seen after repeated doses of snake venom.

Rheumatic endocarditis :

394. Incidence is surprisingly high.

Syphilitic aortitis :

395. This type of disease remains fairly frequent.

Exophthalmic goitre :

396. The incidence is, in my opinion, increasing and at a higher rate since the commencement of the Sino-Japanese conflict.

Tabes dorsalis :

397. Incidence remains fairly high.

Remarks on Children's out-patient department Clinic:

398. The outstanding features are the high incidence of faulty nutrition including the 51 cases in children seen in the Adult out-patient department Clinic.

Opium addicts :

399. Please see Appendix I.

Special Investigations.

Cerebro-spinal meningitis :

400. Investigations were carried out on the effects of certain Sulphonamide preparations in Cerebro-spinal meningitis. Minimum doses were used and administration was confined to injection method only.

A short paper on the above results is published in Caduceus.

Pulmonary tuberculosis :

401. There is an ever increasing demand for accommodation of early cases in the special in-patient clinics at the Queen Mary Hospital.

402. Artificial pneumothorax treatment is carried out in all suitable male cases with gratifying results.

403. In addition treatment by the gold preparation Solganal B. Oleosum in the healing fibrotic type of disease seems to be most useful therapeutic measure. In the selected cases treated the use of the blood sedimentation rate as a method of prognostic value bears out the claim of the importance of the use of gold preparations in suitable cases.

It is very difficult to persuade Chinese female patients to consent to artificial pneumothorax treatment.

Anaemia :

404. The type especially due to Ankylostomiasis has been the subject of investigation by my Assistant Dr. Chiu and the question is discussed in a paper being published—" A Clinical Study of Hook-worm Disease."

Gastric function :

405. Fractional test meals continue to be carried out and a clinical note on "Passing the Ryle's Tube in Fractional Test Meals" has been published by Dr. Chiu.

406. Polyneuritis due to vitamin B_1 deficiency continues to be studied with special reference to the Aalsmeer Test as regards its use in the differentiation of true beri-beri, its value in the control of treatment by synthetic vitamin B_1 preparations and in prognosis.

407. The kind co-operation of the University Physiology Department under Professor Ride is being continued with reference to the pyruvic acid content of the blood in beri-beri cases.

408. Some observations have also been carried out with reference to the value of the skin dye test as a means of estimating vitamin C storage deficiency in various diseases.

REPORT ON THE SURGICAL DEPARTMENT FOR THE YEAR 1938.

Staff :—

Kenelm H. Digby, M.B., B.S.; F.R.C.S. England. (Ho Tung Professor of Clinical Surgery; Professor of Surgery; Consulting Surgeon to the South China Command; Surgeon, Queen Mary Hospital, and Consultant in Surgery to the Hong Kong Government.)

Wm. Lai Fook, M.B., B.S.; (First Assistant to the Professor of Surgery).

Yeung Tsaw Che, M.B., B.S.; (Second Assistant to the Professor of Surgery).

Dean A. Smith, M.A. (Camb.), M.B., B.CH. (Camb.), D.T.M. & H. (Lond.). Anaesthetist.

Hargreaves, G. M., M.R.C.P. (Ed.), D.O.M.S., (Lecturer in Ophthalmology, and Surgeon in charge of the Ophthalmological Out-patients to May when he went on leave).

Au King, M.B., B.S.; (Acting Lecturer in Ophthalmology from May).

Farr, F. J., M.B., CH.B., L.B.S., D.M.R. & E. (Lecturer in Radiology).

Selby, J. A. R., M.B., CH.B.; (Lecturer in Venereal Diseases).

Yeang Cheng Hin, M.B., B.S.; (House Surgeon from January to June).

Naidu, P. T., M.B., B.S.; (House Surgeon from July to December).

Kan Lai To, M.B., B.S.; (Clinical Assistant from January to June, Out-patient Officer from July to December).

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409. There is a shortage of beds for the treatment of surgical tuberculosis. This is particularly the case for children. Many cases referred by charitable organisations and general practitioners have to be refused admission and treatment.

410. The weekly staff round from 5 to 6 p.m. on Mondays (which general practitioners and other qualified men are invited to attend) has been continued throughout the year.

411. Investigations have been carried out on the subjects of nasopharyngeal carcinoma, subepithelial lymphatic glands, and intrahepatic stone formation.

Some work has been done on a new incision for kidney operations.

412. The following papers from the Department appeared in 1938 in the Caduceus :—

"The Role of the Subepithelial Lymphatic Glands" by K. H. Digby.

"A Case of Gout in a Chinese" by C. H. Yeung.

413. 450 cases were treated in the Surgical Wards (Horsley, Hilton and Lister) during the year 1938.

414. 514 operations were performed under general anaesthesia.

415. 3,497 cases were treated in the Out-patients Department.

416. 1,298 cases were treated in the Ear, Nose and Throat Department.

417. 2,784 cases were treated in the Eye Clinic (Out-patients).

418. 85 cases were treated in the Eye Clinic (In-patients).

OBSTETRICAL AND GYNAECOLOGICAL UNIT.

Report by the Head of the Department of Obstetrics and Gynaecology,

Prof. Gordon King,
F.R.C.S. (Eng.), F.C.O.G., L.R.C.P. (Lond.).

419. The unit was under the acting headship of Dr. P. F. S. Court, F.R.C.S., Ed., M.R.C.S., Eng., L.R.C.P., Lond., from the beginning of the year until 16th November. On 17th November, Professor Gordon King took over the direction of the department.

420. Gynaecological in-patients are all treated now at the Queen Mary Hospital, where a ward of 21 beds is placed at the disposal of the University. The Tsan Yuk Hospital, with 60 beds, is now devoted exclusively to Obstetrical cases.

421. During the year the following numbers of cases were treated.

Table LVII.

Out-patients department:—	
New cases	2,564
Old cases	3,649
Maternity cases:—	
Tsan Yuk Hospital	2,397
Gynaecological cases:—	
Queen Mary Hospital (University cases)	428

422. There were 109 cases in the maternity wards who showed a temperature of 100.4F. or over on one or more occasions during the puerperium, in addition to 14 maternal deaths. This gives a maternal morbidity rate of 5.43% and a maternal mortality rate of 0.62% in the year's total of 2,265 deliveries.

Table LVIII.

Classification of cases:—	*Tsan Yuk Hospital.*
Vertex presentations	2,139
P. O. P.	63
Breech	66
Face	3
Transverse	17
Twins	23

Table LIX.

Causes of Death.

Tsan Yuk Hospital:—

1.	Pre-eclamptic toxaemia, cardiac failure	1
2.	Central placenta praevia, uterine haemorrhage	1
3.	Peritonitis, cardiac failure	1
4.	Avitaminosis B1, cardiac failure	3
5.	Chronic nephritis, cardiac failure	1
6.	Morbus cordis, cardiac failure	1
7.	Lobar pneumonia, cardiac failure	1
8.	Post-partum haemorrhage	1
9.	Aortic incompetence, cardiac failure (undelivered)	1

Kennedy Town Hospital:—

1.	Smallpox	2

Queen Mary Hospital:—

1.	Parotitis, broncho-pneumonia, cardiac failure	1

Table LX.

Ante-natal Clinics:—

New cases	575
Old cases	489

Table LXI.

Infant Welfare Clinics:—

Tsan Yuk Hospital—

New cases	1,346
Old cases	1,783

Table LXII.

Statistics of the Gynaecological Department:—

Number of admissions—	
Queen Mary Hospital	428
Number of operations performed—	
Queen Mary Hospital	300
Deaths—	
Queen Mary Hospital	3

APPENDICES.

Return A.

MEDICAL, HEALTH AND LABORATORY SERVICE STAFF.

(i) ADMINISTRATIVE STAFF.

The Director of Medical Services	1
Deputy Director of Medical Services	1

Clerical Staff.

Secretary	1
Assistant Secretary	1
Stenographer	1
Accountant	1
Clerk, Class II	1
Clerks, Class III	3
Clerks, Class IV	3
Clerks, Class V	4
Clerks, Class VIA	5
Clerks, Class VIB	28
Special Class Clerks	2

(ii) INVESTIGATIVE DIVISION.

Bacteriological Institute.

Bacteriologist	1
Assistant Bacteriologist	1
Senior Laboratory Assistant	1
Laboratory Assistants	5

Malaria Bureau.

Malariologist	1
Assistant to Malariologist	1
Malarial Inspectors (1 vacancy)	8

(iii) CHEMICAL DIVISION.

Government Analyst	1
Assistant Analysts	2
Assistant Analyst (Chinese)	1
Assistant Analyst (Chinese) Class II	1

(iv) HEALTH DIVISION.

Urban Branch.

Health Officers	2
Chinese Health Officer	1
Lady Medical Officer (Part time)	1

Port Health Branch.

Port Health Officer and Inspector of Emigrants	1
Second Port Health Officer & Inspector of Emigrants	1
Chinese Port Health Officers	2
Port Health Inspector	1
Chinese Health Inspector	1
Public Vaccinators	12
Public Vaccinators (Temporary)	23

Fumigating & Disinfecting Bureau.

Fumigator	1

Venereal Diseases Branch.

Venereal Diseases Officer	1
Chinese Venereal Diseases Officer	1
Venereal Diseases Technical Assistant	1
Charge Dressers, Class I	2
Staff Dressers	2
Venereal Diseases Nurse	1

Maternity and Child Welfare Branch.

Lady Medical Officer	1
Chinese Lady Medical Officer	1
Infant Welfare Nurses	8
Infant Welfare Nurse (Temporary)	1

School Hygiene Branch.

Health Officer for Schools	1
Chinese Medical Officers for Schools	2
School Nurses	5

Chinese Hospitals and Dispensaries Branch.

Visiting Medical Officer	1
Lady Visiting Medical Officer	1
Chinese Resident Medical Officers	3
Chinese Lady Medical Officers	3
Stenographer	1
Interpreter and Assistant	1
Tutor Sister	1
Dispensary Nurse	1
Midwives	7

(v) MEDICAL DIVISION.

Clinical Branch (General).

Government Consultants	3
Senior Medical Officer	1
Medical Officers	9
Chinese Medical Officers	5
House Officers	7
House Surgeon	1

Nursing Staff (General).

Principal Matron	1
Matrons, Grade I	2
Matrons, Grade II	5
Nursing Sisters (2 vacancies)	59
Charge Nurse (2 vacancies)	1
Staff Nurses	19
Probationer Nurses (3 vacancies)	101
Charge Dressers, Class I	2
Charge Dressers, Class II	5
Staff Dressers	5
Probationer Dressers	33
Linen Maid	1

Nursing Staff (Mental Hospital).

Head Attendant	1
Assistant Attendant	1
Mental Nurses	3
Probationer Dressers	3

Kennedy Town Hospital (Infectious Diseases).

Charge Nurse	1
Staff Nurses	2
Charge Dressers, Class II	2
Staff Dresser	1
Steward	1

Tsan Yuk Maternity Hospital.

House Medical Officers	2
Matron	1
Assistant Matron	1
Midwives	5
Pupil Midwives	13

Stewards.

Steward	1
Steward (Temporary)	1
Assistant Steward	1

Pharmacy Branch.

Apothecary	1
Assistant Apothecary	1
Storekeeper	1
Storekeeper (Temporary)	1
Charge Dispenser, Class I	1
Charge Dispensers, Class II	4
Staff Dispensers	5
Probationer Dispensers	4

Radiological Branch.

Radiologist	1
Radiographers	2
Masseuses	2
X-Ray Sister	1
Probationer Masseuses	3
Radiographic Assistants	2

New Territories Branch.

Health Officer	1
Chinese Medical Officers	2
Midwives	9
Dresser	1

Miscellaneous.

Steward's Storeman	1
Storemen	2
Electrician	1
Installation Mechanic	1
Fitters	4
Motor Drivers	2
Office Attendants, Messengers, Wardboys, Amahs, Coolies, &c. (33 vacancies)	429

Lai Chi Kok Temporary Chinese Hospital.

Chinese Medical Officers	2
Matron	1
Assistant Matron	1
Nurses	17
Steward, Boys, Amahs, Coolies, &c.	54

Return B.

LIST OF CHINESE CHARITABLE, GOVERNMENT, NAVAL, MILITARY AND PRIVATE HOSPITALS, ETC.

Chinese Charitable Hospitals.

Chinese Eastern Maternity Hospital.	32
Kwong Wah Hospital.	330
Tung Wah Eastern Hospital.	261
Tung Wah Hospital.	513

Government Hospitals.

Female Prison Hospital, Lai Chi Kok.	9
Hong Kong Prison Hospital at Stanley.	60
Infectious Diseases Hospital.	[illegible] (162)
Kowloon Hospital.	14[illegible]
Lai Chi Kok (Cholera) Hospital.	[illegible]
Lai Chi Kok (Relief) Hospital.	200
Leper Settlement.	
Mental Hospital.	190
Queen Mary Hospital.	[illegible]
Tai Po Maternity Ward.	5
Tsan Yuk Hospital.	[illegible]

Naval Hospital.

Naval Hospital, Wanchai.	2[illegible]
Royal Naval Sanatorium.	

Military Hospitals.

Combined Military Hospital, Kowloon.	[illegible]
Military Hospital, Bowen Road.	– [illegible]

Private Hospitals.

Alice Memorial and Affiliated Hospitals.	125
Babington Sanatorium.	20
Canossa Hospital.	16
Haw Par Hospital.	50
Hong Kong Sanatorium and Hospital.	106
Majima Hospital.	7
Matilda Hospital.	50
Precious Blood Hospital.	62
St. Francis Hospital (wanchai)	90
St. Paul's Hospital.	200
War Memorial Hospital.	65
Tsuen Wan	10
Kam Tin	12

Appendix I.

DRUG ADDICTION AND DRUG TRAFFIC IN HONG KONG.

1. During the year under review the following narcotic drugs were seized by the Revenue authorities:—

Opium raw	27,084 taels (2,257 lbs.)
Opium, prepared	12,758 taels (1,063⅙ lbs.)
Heroin	30.11/15 ounces
Heroin pills	2,713,181

2. Neither morphine, cocaine nor cannabis indica were obtained in drug raids made during the year.

3 446 opium addicts were treated during the year at the Tung Wah Eastern Hospital. Of these patients only two remained in hospital more than twenty days, the average duration of stay in hospital being nine days. The method of treatment employed was the intramuscular injection of blister fluid, but as these patients are difficult to control it is quite impossible to assess the value, if any, of the treatment. Another factor which militates against efficient treatment of these addicts is the ease with which opium can be smuggled into the Chinese hospitals. Cases of addiction have also been treated in the Queen Mary Hospital, but only ten cases were admitted during the year and only one of these was a private patient. The results are reported as:—seven cases relieved, two cases unchanged and one still under treatment. The routine treatment adopted was withdrawal and auto-serotherapy on the Modinos principle.

4. The attendance of addicts at the out-patient clinics has declined because of the withholding of the stock anti-opium mixture which contains ten minims of tincture of opium in each ounce, and was formerly responsible for a high attendance at out-patient clinics.

5. It seems that the opium smoking indulged in by members of the coolie class is not, in itself, a very deleterious habit, although it is certainly harmful in that it lessens the amount of money which the family can spend on food. The average daily amount spent on opium by coolies who smoke it, is 10-50 cents.

6. The whole question of narcotic drugs and their abuse in Hong Kong is in a very unsatisfactory condition. At the moment anyone can go into a Chinese restaurant, ask for opium and get it, and as long as this state of affairs obtains it is not likely that efforts to reduce the number of opium addicts will be successful.

Appendix II.

REFUGEE RELIEF IN 1938.

1. The measures taken during the year to cope with this influx were as follows. The Tung Wah Hospitals Committee, the Street Sleepers Shelter Society, the Society for the Protection of Children, the Salvation Army and various other charitable organisations laboured nobly to improve the lot of these thousands of homeless people, but their combined resources proved inadequate for the task, and finally Government was compelled to take over the greater part of the burden.

2. The Tung Wah Committee had been entrusted with the care of homeless and friendless refugees in the early part of the year, and various buildings were lent to them for this purpose, including the former Government Civil Hospital, part of the old Victoria Gaol and the building which had formerly been used as the Kowloon Magistracy. By May, 2,648 refugees were being cared for in this way.

3. The Tung Wah Committee were also able to arrange for the repatriation of over 30,000 refugees between July, 1937, and June, 1938. Needless to say, this number represented but a small proportion of the many tens of thousands who sought shelter in these territories.

4. Overcrowding, already one of the most pressing problems confronting the health authorities, was aggravated to the point of danger, and a severe outbreak of cholera was superimposed on the worst epidemic of smallpox in the history of the Colony. The average number of persons on each floor of the typical three-storeyed Chinese house rose from between fifteen and twenty to from thirty to as many as sixty and those who could find no shelter in houses slept in the streets.

5. A police census taken in June, 1938, gave a figure of over 27,000 for street sleepers.

6. To relieve these conditions Government decided to house about 5,000 people in the urban area, and three refugee camps were constructed, one on the Island at North Point, a second at Ma Tau Chung and the third at King's Park, the two latter locations being in Kowloon on the Mainland.

7. The camp at King's Park was intended to take those refugees who had been looked after by the Tung Wah Committee and were awaiting repatriation. The other two were intended primarily for Hong Kong born women and children sleeping in the streets. A second census carried out in October—the cold weather having started—showed that there were still over 15,000 street sleepers.

8. The writer of this Report assisted by a Committee appointed by the Governor was responsible for the administration and health organisation of these urban camps and was solely responsible for the rural camps which had to be hurriedly constructed on a more primitive basis in the last three months of the year.

9. Industrial and educational activities were handed over to a voluntary organisation, the Emergency Refugee Council, which came into being in June, 1938. This body has done particularly valuable work in coordinating the activities of the various refugee relief associations operating in Hong Kong.

10. After the Japanese landed at Bias Bay on October 12th, many thousands of refugees poured across the frontier.

11. A matshed camp was built at Pat Heung to hold 5,000 people, and later on, in November, railway truck camps were opened at Fanling to house the additional refugees who had crossed the frontier following the "mopping up" operations conducted by the Japanese on November 25th. The Fanling camps provided accommodation for 3,000-4,000 refugees.

12. As a result of concerted action by the various committees and organisations dealing with the problem, many of the refugees were persuaded to return to Kwangtung, and by the end of the year only about 4,000 remained in Government camps in the New Territories, apart from those in villages in the New Territories, and about 3,000 in camps in the urban area.

13. Government's main object throughout was to provide food shelter and adequate health services for those who needed them, and great assistance was given by the unremitting efforts of the Emergency Refugee Council and allied organisations. All classes of the community have responded to appeals for help for the refugees in a remarkable way, and several hundreds of thousand dollars have been given to the various funds providing such help.

14. The hospital accommodation of the Colony was severely taxed by this advent of refugees, and three new wards were opened at the Infectious Diseases Hospital as well as an auxiliary hospital of 500 beds at Lai Chi Kok on the outskirts of Kowloon.

15. The extent of the refugee problem may be gauged by the fact that the number of persons coming into the Colony during 1938 by steamship and train exceeded those leaving by 305,957. This figure does not include an unknown number probably in the neighbourhood of 200,000 who entered the Colony during the year over land frontiers and in junks and sampans and in other ways. This represents an addition of nearly one half to the normal estimated population of the Colony. As was to be expected, a proportion of the cases of cholera, smallpox and cerebro-spinal meningitis which were seen in the Colony were imported from infected parts of China.

Appendix III.

SMALLPOX IN HONG KONG IN 1938.

1. The disease was already well established in Hong Kong at the beginning of 1938, and the incidence of it increased week by week to reach its maximum in March. It declined gradually from then on and finally died out in July to reappear in a minor form at the end of the year when refugees from Kwantung poured across the frontier to escape "mopping up" operations by Japanese troops.

2. Five Europeans were stricken with the disease. One died of a severe attack of unmodified confluent smallpox in January, 1938, although he said he had been "vaccinated" in England in October, 1937. No scars were found to corroborate his statement. Two others recovered from moderately severe semi-confluent attacks, and two had mild discrete and modified attacks. The mortality among Europeans was therefore 20 per centum. All said they had been vaccinated before contracting the disease, and all save the one who died were clearly speaking the truth.

3. Taking the series as a whole, it was found that seventy-three of the patients lived twelve hours or less after admission to hospital, fifty lived more than twelve hours but less than twenty-four. These figures make it easy to realise how difficult if was to obtain accurate histories in many of the cases; and, in fact, in 177 cases it was impossible to obtain a clear account of the course of the disease from the patient. The majority of such cases were the young children. Four cases were dead on arrival at hospital.

4. The number of toxic cases in the series was surprisingly high. Eighty-three of the total of 834 were classified as toxic. Forty of these cases were men and most of these men were in the twenty-thirty decennium and were well-developed. Of the forty-three women in this group, seventeen were either pregnant or puerperal. It is well known that pregnancy and the puerperium conduce to the manifestation of toxic signs and symptoms in smallpox. Two men only, in this group of eighty-three cases, recovered. All the women died. The mortality was, therefore, 98 per centum in the toxic cases. Twenty-seven puerperal women and seventeen pregnant women were admitted suffering from the disease. Of the twenty-seven puerperal women eight developed toxic smallpox and died, seven died of other forms of the disease, and twelve recovered. Of the seventeen pregnant women, six died of toxic smallpox, one of another form and ten recovered.

5. The figures relating to vaccinal state of patients cannot, unfortunately, be regarded as absolutely accurate. This is so for many reasons, among them being forgetfulness, untruthfulness and inability to think clearly during illness. In the whole series, three patients gave a history of having been variolated in infancy. All had severe attacks of smallpox. All recovered. One woman of twenty with a pock-marked face, stated definitely that she had had smallpox in infancy. Her second attack was mild but was undoubtedly smallpox.

6. When the cases are divided into age groups, the results of vaccination become clearly apparent—see below.

Table I.

AGE GROUPS.

	Recoveries	*Deaths.*	*Percentage. mortality.*
Under 1 :—			
Unvaccinated males	4	16	80
Vaccinated ,,	8	3	27
Unvaccinated females	5	35	87
Vaccinated ,,	3	2	40
1-5 :—			
Unvaccinated males	18	24	57
Vaccinated ,,	7	2	22
Unvaccinated females	18	32	64
Vaccinated ,,	3	3	50
5-15 :—			
Unvaccinated males	15	13	46
Vaccinated ,,	8	2	20
Unvaccinated females	11	17	61
Vaccinated ,,	10	8	44
15-30 :—			
Unvaccinated males	16	52	76
Vaccinated ,,	147	29	16
Unvaccinated females	15	39	72
Vaccinated ,,	70	20	22
30-60 :—			
Unvaccinated males	6	15	71
Vaccinated ,,	46	7	13
Unvaccinated females	2	19	90
Vaccinated ,,	30	11	27
Over 60 :—			
Unvaccinated female	—	1	100
Vaccinated ,,	—	1	100
Total	442	351	

7. In seventeen cases it was impossible to obtain any information truthful or untruthful about the vaccinal state of the patients.

8. The series as a whole gives a mortality rate of 35 per centum for males and 51 per centum for females. It will be noted that the mortality is considerably higher in females than in males at all age groups. Why this is so is not known.

9. It is well-known that in smallpox, as in all the acute exanthemata, expectant treatment is the only rational treatment. Nevertheless, an attempt was made to assess the value, if any, of streptocide in smallpox. The drug appears to be of undoubted value in relieving and clearing up the septic complications which so often occur in the focal phase of the disease. This is understandable when it is remembered how frequently a haemolytic streptococcus is isolated from the boils and abscesses which appear at this stage. On the toxic phase, that is to say on smallpox proper, the drug appears to exert no influence at all. It indubitably saved life in one or two cases where severe and extensive skin-sloughing had occurred, and its action was dramatic in the cases showing renal complications. One of these cases, a young boy of nine developed an acute nephritis during convalescence from smallpox. His urine became "smoky" and dropped to six ounces in the twenty-four hours and he developed facial oedema. Within eight hours of the administration of streptocide his fever had abated from 102° to normal and his recovery thenceforward was uninterrupted.

10. The other patient was a young woman of twenty-seven who was recovering from a severe attack of unmodified, discrete smallpox. For no apparent reason she began to have repeated rigors in the second week of convalescence. Culture of the urine revealed a haemolytic streptococcus and the exhibition of streptocide brought about an immediate recovery. The drug was used in 105 cases altogether, and as local experience increases, there are more grounds for belief that it has some value, especially in children, in tiding the patient over those days of the focal phase when septic absorption is at its height.

11. It would appear desirable that the usual points regarding its administration in smallpox should be observed, although it is not necessary to use the drug in the high dosage given in cases of meningitis mainly because the effect to be obtained by its use in the former disease is so much less clear cut.

12. Another line of treatment which was tried was the injection intramuscularly of convalescent serum. This method was employed in thirty-one cases of whom nine died and twenty-two recovered. These figures prove nothing. In one toxic puerperal case serum acted dramatically, and the result obtained in this one case appears to justify an extended trial of such serum. It was found in the course of the epidemic that sera from patients who had only just recovered were ineffective. To be of any use at all, serum must, apparently, be collected from patients who developed smallpox at least one month before, and preferably six weeks. Anti-bodies to the virus seem to take long to develop.

13. As the serum had to be taken from convalescents at Kennedy Town Hospital this line of treatment was not used as widely as it deserved to be, for a converted police station is not an ideal place in which to collect and store serum under aseptic conditions.

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Medical Officer.

Appendix IIIA.

Rough Translation of a Talk given by Mr. Ho Kom Tong, O.B.E. on ZBW at 7.45 p.m. on 25th April, 1938 in Hong Kong on the topic of

The Importance of Being Immediately Vaccinated.

Ladies and gentlemen :—

1. I suppose you have all read from the newspapers of the smallpox epidemic which is raging in our midst. From the 1st of January up till now the number of reported cases totals about 2,100 with some 1,600 deaths, while quite recently there were sixty-nine cases reported in one day. As far as I can remember this is the worst smallpox scourge Hong Kong has ever known.

2. I was therefore highly delighted when I learned that the Chinese Representatives on the Executive and Legislative Councils (the Hon. Dr. R. H. Kotewall, C.M.G., LL.D., the Hon. Mr. T. N. Chau, C.B.E., the Hon. Mr. M. K. Lo and the Hon. Dr. Li Shu Fan) held a conference with the Director of Medical Services (the Hon. Dr. P. S. Selwyn-Clarke) as to the best methods of stamping out this epidemic. The decision they arrived at was a house-to-house campaign to induce people to get vaccinated. This, you will agree, is a very wise policy, for although the St. John Ambulance Brigade, the Chinese Y.M.C.A. and the Chinese public dispensaries have for several months past been giving free vaccinations to a large number of people, yet there are still many who have not been vaccinated. The reason, I think, lies in the fact that either they are too lazy or else they are not yet fully conscious of the great danger they are in by not being vaccinated.

3. In these circumstances, the Chinese Representatives approached the Government to pass immediate regulations to organise a number of authorised persons to go to every house in the Colony and get people to be vaccinated without charge. They will not, of course, interfere with any one, their object being simply to induce those who have not been vaccinated to submit to vaccination. Therefore you need have no fear. This vaccination campaign will commence on the 1st of May and will last daily from 9.00 a.m. until the whole Colony has had the benefit of free vaccination.

4. I am sure those who now hear me know that the Government spends a great deal of money to secure fresh lymph for the purpose of vaccination while doctors and nurses devote a lot of time to this voluntary work. The Government gets nothing out of this. The whole idea of this vaccination is to bring benefits to you—in short, to save your lives. I sincerely hope, therefore, that all the citizens of this Colony will unite to help the Government to make a success of this campaign.

5. Those who are able to show proofs of recent vaccination will not of course have to submit to another vaccination, but those who have not been recently vaccinated must, for the sake of their own lives and the lives of those living near them, submit to vaccination. Don't delay or hesitate because you will never know when you may be a victim of this terrible scourge. If, on the other hand, you want to cheat the Government by showing false proofs of recent vaccination, you are really cheating your own selves. Also, do not conceal any cases for by so doing you are not only deceiving the Government but your own selves.

6. Those who have been vaccinated will, of course, avoid the danger of an attack from smallpox for the vaccination is an insurance against such an attack. On the other hand, those who refuse to be vaccinated will assuredly know that when they are afflicted with smallpox, their case is so serious that even the best of Western and Chinese medical assistance cannot give them absolute cure.

7. It is well-known to both Chinese and Western medicine that smallpox is a very difficult type of disease to cure for there are many types of smallpox and they differ in virulence according to different constitutions and to the quality of the bodily resistance of the victim. Therefore, I feel compulsory vaccination to be indispensable because prevention is better than cure.

8. I strongly urge everyone of you to remember these words of mine and if you have not yet been vaccinated not to delay any longer but to get free vaccination at once.

9. I, myself, am a very keen student of Chinese medicine and have studied various diseases and ills of the body for over 30 years and now I want to tell you in a few words how China discovered smallpox many centuries ago.

10. In the 25th year of Emperor Kin Mo (建武) of the Han Dynasty (some 1,900 years ago) the Emperor ordered his able General Fook Po (伏波) to lead a huge army to invade Wu Ning (武陵) a district in the modern Hunan Province. On the way, the General and many of his troops died from fever. Afterwards, the corpses were found to be covered with black or red spots, each the size of a pea. On account of the likeness of these spots to a pea, the physicians in those days called the disease the pea or smallpox disease. This is the origin of the name for this particular malady. The epidemic among the troops of the Emperor was so serious that he had to withdraw. But at that time though the physicians of the Emperor did their best to find out the cause of the disease and its prevention and cure, they were not successful, though many books were written on the subject.

11. The next stage of development came about 1,500 years later in the Ming Dynasty (A.D. 1368-1664). A famous doctor by the name of Lip Ku Ng (聶久吾) published a set of books entitled the methods of saving children from smallpox (活幼心法). This publication dealt with smallpox and measles and contained many illustrations and records of cases met with by the author. He propounded the theory that smallpox was caused by the presence of poison in the embryo before birth. He opined that all men and women, rich or poor, must have this poison in their system because it was there before they were born. He then collected the scabs from the dried up pox of afflicted children and ground these scabs into powder and blew them into the nose of men, women and children as a preventive measure against the outbreak of smallpox. Here we have the principle of vaccination for the powdered smallpox scabs acted like the smallpox lymph in driving out the poison from the body and so rendered the attack less serious than it would otherwise be if the poison came out without "vaccination". This method of prevention, though, crude, saved many lives.

12. It is true that during the Sung Dynasty (1127-1280 A.D.) the principle of vaccination was already known, but it hardly advanced beyond mere theory among Chinese doctors. It was left to Dr. Lip Ku Ng to give practical effect to the theories of his predecessors.

13. The third stage of development was brought about in the 52nd year of the Emperor Kiang Hsi of the Ching Dynasty (1664-1911 A.D.). The Emperor sent his own private physician by the name of Chu Shun Koo (朱純嘏) to Mongolia and other places outside China Proper to carry out research into the origin of smallpox as well as to find out its cure and prevention. After a lapse of 26 years, he returned to China Proper and composed a book entitled "Smallpox and measles" which is a classic on the subject of smallpox. Instead of the method of blowing smallpox scabs into the nose, he advocated the inoculation of human smallpox lymph into the blood stream by means of vaccination of the arm.

14. Here we see the gradual stages of improvement of methods by the Chinese medical practitioners.

15. The next stage brings us to the 19th year of Emperor Tao Kwong of the Ching Dynasty (A.D. 1829). Dr. Jenner of England, during a very severe epidemic there, discovered the existence of pox on the udder—light blue in colour—of cows. He drew lymph from the two light blue coloured pox and vaccinated the lymph into bullocks. Then he drew lymph from the bullocks and vaccinated them into the arms of human beings. By this means he discovered a method of vaccination which has stood the test of time, for it is obvious that lymph from human beings cannot be absolutely safe, since such lymph may contain the germs of many human diseases such as tuberculosis, leprosy, venereal diseases, etc., so that while a man may be safe from smallpox, he may, because of the diseased lymph, contract another malady. Lymph from cows is therefore safer because it is always easier to examine a cow before lymph is extracted from it.

16. When Dr. Jenner introduced vaccination in England, a Cantonese by the name of Yau Ho Chuen (邱浩川) was there at that time and he studied this method as thoroughly as he could and returned to Canton and vaccinated over a hundred thousand children without a single fatal case of smallpox. He tried his best to persuade his countrymen to substitute the use of cow lymph for human lymph but at that time opinion was so conservative that it took fifty years before the use of cow lymph became popular.

17. I, myself, remember seeing, over 50 years ago, several cases of vaccination by means of human lymph at the Tung Wah Hospital. Nowadays, of course the Tung Wah Hospital no longer uses such a method. China, too, has discarded it, though occasionally in the interior we still hear of cases of the use of human lymph as the medium of vaccination because cow lymph is sometimes unobtainable.

18. In the old days we in Hong Kong used to get cow lymph direct from Great Britain, the journey occupying 1½ to 2 months. The voyage through the Suez Canal being at times very hot, the lymph often got spoiled so that when they were used for vaccination they proved ineffective and naturally gave no protection to the unsuspecting persons who were vaccinated with these defective lymphs.

19. Many years later, lymph was imported from Bangkok instead of Great Britain, and this not only meant a saving of time but also the certainty of having fresher lymph. To-day the lymph which is used, is absolutely fresh because it is prepared in Hong Kong.

20. The Hong Kong Government has been doing its utmost in every way to induce the public to get vaccinated without any charge. Now the Government is going still further for the sake of the lives of you all, by means of a house-to-house campaign to vaccinate those who have not yet been vaccinated. I want to urge you all, once again, not to neglect this very important measure of precaution.

21. Some time in October last I mentioned to various friends and relatives of mine that by the next Spring, that is, during the early part of 1938, there must be a lot of measles, smallpox, meningitis and similar disease in the Colony, they wondered why. I then pointed out to them that after every war, disease and pestilence would follow. One need only to notice the large number of guns fired and bombs thrown to realise the prodigious amount of poison which has been filling the air for many months up North. Add to this the fact that many dead bodies have been decomposing during the whole period of hostilities and you will realise how polluted the air is and has been for some time. The poison of gun-powder and of decomposed bodies is carried everywhere by the help of wind and later we in South China must get a share of this poison. Recently, the foggy and damp weather has added to the foulness of the atmosphere. It is only natural therefore for smallpox, measles, meningitis, etc. to flourish.

22. Now, I ask you all to do your utmost to help the Government by persuading all your friends and relatives to get vaccinated at once. Above all, I would urge the parents to get their children vaccinated. All parents have a very serious responsibility, for if they fail to vaccinate their children and then because

of such neglect the little ones die of smallpox, then it is almost a case of murder of innocent children. Even those who have been vaccinated a few years ago ought not to think that they are therefore immune from attack. I have a friend Mr. Chang, the Secretary of the Macao Race Club, who has had a vaccination once a year for the past fifteen years, and who thought that this year he would not take because for the past fifteen years this has been the case. He was vaccinated recently and to his surprise the vaccination took very fully. This is a proof that this year the epidemic is the most severe known in Hong Kong. Therefore, even if you have had vaccination seven or eight times in your life you must be vaccinated again. Further, even infants should be vaccinated, and I would urge that parents should start to allow their infants to be vaccinated when they are three weeks old. I have tried to impress upon you the great importance of being vaccinated, and I hope very fervently that, with you all co-operating by seeing that everyone near you is duly vaccinated, this virulent epidemic of ours will soon disappear from our midst.

Good-night, everybody.

(Note : This radio broadcast in Chinese was made by Mr. Ho Kom Tong, O.B.E., a distinguished and influential Chinese citizen of Hong Kong and the leader of herbalist practitioners. It provides an example of public health propaganda carried out at the initiation of the Government Medical Department in which valuable lessons are taught, even though some of the views expressed—*e.g.*, the influence of gun-powder and the bodies of persons killed in action on the incidence of smallpox—may be a little unorthodox ! P.S. S-C.)

Appendix IV.

CHOLERA IN HONG KONG IN 1938.

1. The first case of cholera was notified on May 25th, 1938. The disease occurred sporadically throughout June and in July began to reach epidemic proportions. The virulence of the disease abated as the summer wore on, and the death-rate which had been 71 per centum during the first two months—that is to say in June and July—was reduced to 30-40 per centum during the months of August, September and October. The main cause of this reduction is undoubtedly to be ascribed to the well-known decrease of virulence noted in all the major epidemic diseases when an epidemic is declining; but another factor which certainly exerted some influence upon the mortality was the introduction of a routine line of treatment which was inculcated into and carried out by the staff of the hospital. It is probably more than mere coincidence that the abandonment of the experimental phase in treatment synchronised with an immediate fall in the mortality of the disease. The numerical incidence of the disease decreased as winter came on, but a few cases occurred in December and three remained in hospital at the end of the year.

2. When the cases are arranged in age groups it will be noticed that the mortality peaks are attained at the extremes of life. Old women survived the disease more readily than old men, little boys more readily than little girls.

The age groups are as follows :—

Table I.

		Total	Deaths	Recoveries	Percentage mortality
Under 5	Males	8	2	6	25
	Females	8	6	2	75
1-5	Males	4	2	2	50
	Females	3	2	1	66
5-15	Males	11	5	6	45
	Females	8	3	5	38
15-30	Males	89	39	50	44
	Females	46	23	23	50
30-60	Males	204	126	78	62
	Females	97	49	48	50
60 and over	Males	17	16	1	94
	Females	21	13	8	62

3. The mortality rate for the series as a whole is 55 per centum. The mortality for males is slightly less than that for females, but the difference is not significant, the male mortality being 54 per centum, the female 57 per centum. The incidence of the disease was much higher in males, and this is so in every age group except the oldest sixty or over. 333 males and 184 females were attacked by the disease.

4. The two greatest dangers to life in cholera are hyperpyrexia in the reaction stage, especially after the infusion of saline, and anuria following on the suppression of the collapse stage. Until measures were adopted such as the half hourly charting of the rectal temperature during the infusion of saline and the application of ice packs when necessary, several deaths occurred from hyperpyrexia. In the first two months of the epidemic, June and July, several cases were admitted in hyperpyrexia; that is to say with a rectal temperature of 104° or over on admission. Such cases are uniformly fatal. The principal measure of value in the promotion of diuresis was found to be the six hourly intravenous infusion of equal quantities—usually 1,200 *c.c.* of sodium bicarbonate saline (grs. 160 to 1 pint) and normal saline.

5. The complications noted were parotitis going on to suppuration in five cases, keratitis, skin sepsis, boils, cellulitis in two cases and cholecystitis. Various pulmonary conditions such as bronchopneumonia and bronchitis were also observed and one patient died of a purulent bronchitis which supervened during convalescence. Though naked eye renal changes appear to be rare in cholera, one man recovered from cholera only to perish a fortnight later of a right-sided pyonephrosis. Diphtheria occurred as a sequela in one patient and led to a fatal issue. The commonest mistaken diagnoses were bacillary dysentery, gastro-enteritis and food poisoning. Two cases were seen in which bacillary dysentery and cholera co-existed. One ruptured ectopic gestation and one meningococcal meningitis were also sent in as cholera. Five Europeans were admitted suffering from cholera, and of these one died in anuria and four recovered.

6. The saline solutions used were 2 per centum glucose saline, normal saline and bicarbonate saline (grs. 160 to 1 pint). All patients had bacteriological examinations made from rectal swabs taken on admission and no patient was discharged until he had had two consecutive negative reports. Vibrios persisted in

some cases for remarkably long periods, and this persistence was more commonly noted in children than in adults. One German patient took thirty-one days to become vibrio-free. The data relating to the value of inoculation against cholera are not extensive enough to allow any conclusions to be drawn. Bacteriological records are available on 500 of the 517 cases. Of these 500 cases 349 proved to be vibrio positive, 151 vibrio negative. Some of the vibrio positive cases were only found to be so on a second or third examination. That is to say, 61 per centum of all cases sent in as cholera were bacteriologically proved to be so, while 30 per centum never proved to be cholera. There is little doubt that most of the 30 per centum group were suffering from cholera because 48 per centum of this group died of the disease whereas 52 per centum recovered. Of the proved positive group 40 per centum recovered and 60 per centum died. The figures in tabular form are as follows:—

Table II.

Deaths				*Recoveries*			
Vibrio – ve.		Vibrio + ve.		Vibrio – ve.		Vibrio + ve.	
Male	Female	Male	Female	Male	Female	Male	Female
46	26	145	66	57	22	80	58
72		211		79		138	

7. In a small group of 106 patients who stated definitely that they had not been inoculated, thirty-nine died and sixty-seven recovered. The mortality rate in this group was, therefore, 37 per centum. In a group of twenty-six patients who stated that they had been inoculated this year, only three died. The mortality rate here was 12 per centum. It is fair to say that the poor class Chinese did not avail themselves very widely of the facilities offered them for inoculation against cholera, and they are, of course, the people who suffer more than any other class from the disease. It was distinctly rare to find better class patients suffering from cholera.

8. The points on which most stress has to be laid in the treatment of cholera are these:—the fluid loss must be made good as rapidly as possible and the toxaemia must be diminished by all available means. If the fluid loss be not made good at the earliest opportunity, then the suppression of urine which invariably occurs in the stage of collapse may readily develop into an anuria which will lead to a rapidly fatal issue. Suppression occurs when the blood pressure drops below 70 systolic, and it is therefore one of the aims of treatment to raise and to keep the blood pressure above that level. But if the restoration of the fluid loss be brought about too rapidly the result is apt to be equally fatal for this reason. Saline solution is being poured into the viens of a profoundly dehydrated and collapsed man. The viscosity of the patient's blood is about 1,064-1,070, his extremities are blue and cold, his rectal temperature 104°. The circulation in the walls of the intestine has been in abeyance, if not absolutely at any rate relatively, for many hours. The blood viscosity is rapidly reduced towards the normal figure by the infusion, the circulation is restored and the immediate result is the absorption of a possibly lethal dose of toxin from the small intestine. That this is the course of events is shown very clearly by a study of the half-hourly rectal temperatures taken during infusions. The rise of temperature is frequently sudden and if controlling measures are not to hand may cause disaster. Ice is very much more useful in cholera wards than hot water bottles. Truly did the early Anglo-Indian writers on the disease say that the reactionary stage was even more dangerous than that of collapse. Rogers quotes Calcutta figures to show that over a certain time period, no case of recovery was recorded in Europeans whose temperature rose above 103° in the stage of reaction. This statement is happily not true in Hong Kong if one considers the rectal and not the skin temperature. Of the five

European cases which occurred in this epidemic, one died of anuria and right-sided cardiac failure, the other four recovered, one after a stormy illness in which his rectal temperature rose to 104° on several occasions.

9. It is difficult on occasion to decide whether to restore the lost fluid rapidly, to preserve renal function and to kill the patient rapidly by inducing hyperpyrexia or to give salines slowly and watch the patient perish before he gets out of the collapse stage.

10. A happy mean must be struck and scrupulous observation of the patient's reactions to every infusion must be made. Both skin and rectal temperatures should be plotted throughout the disease, the skin temperature being taken in the axilla as the mouth is useless for this purpose in cholera. The gap between these two temperatures on admission serves as a rough guide to the degree of toxaemia which already exists, and the severity of the febrile reaction to each infusion gives a rough measure of the body's success or failure in combating this toxaemia.

11. Kaolin and permanganate have both been given by mouth as a routine during this epidemic. Their efficacy remains in doubt. 1/100 gr. of atropine sulphate was also given as a routine measure to all cases on admission. It seems that this does help to diminish the incidence of pulmonary oedema, a complication which can be induced only too readily by too rapid infusion of saline.

12. Theoretically it would seem that hypertonic saline was contraindicated because it could only induce a greater flow of fluid from the gut into the blood stream. This would mean that even more toxin would be absorbed and the subsequent reaction would be a violent one. Admittedly, whatever solution is used, there would be some increased absorption from the gut; but as it is desirable to reduce this to a minimum normal saline was chosen as the routine infusion.

13. Until a bacteriologically verified series of the same size has been observed and treated with hypertonic saline, it would be premature to compare the two methods. While it must be readily admitted that the mortality in Hong Kong does not approach Roger's Calcutta figures, it is pertinent to observe that a scrutiny of the 1938 Indian cholera figures shows beyond a peradventure that the mortality rate of cholera in India today is just what it is in the rest of the world, namely 50 per centum. Shanghai is, of course, exempted from this generalisation. It is felt that not even India, has yet claimed a mortality rate of 7 per centum.

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Medical Officer.

Note. The average monthly percentage humidity in Hong Kong in 1938 varied little from 77 in January to 85 in March, 80 or above until September then falling to a minimum of 67 in November and rising to 76 in December.

There was no obvious correlation between the percentage humidity and the monthly incidence of cholera.

The average maximum temperature readings rose from 66°F in January—with a slight transient fall to 63°F in February—to 83.5°F at the commencement of the outbreak in May reaching a peak (89°F) in June and then gradually falling below 80°F in November and to 70°F in December.

The fastigium of the outbreak in 1938 occurred in July, after the temperature curve had reached its maximum for the year in the previous month; but the incidence fell rapidly in spite of the fact that both temperature and humidity showed inappreciable change until November.

The months of highest rainfall in 1938 were May (8.7 inches), July (12.2 inches) and August (7.88 inches).

The suggested association (Russell) between high relative humidity and high temperature accompanied by intermittent rains and the incidence of cholera in Hong Kong is certainly not a close one.

Certain authorities (Rogers) hold the view that cholera becomes epidemic only when the absolute humidity rises above 0.4 inch.

It is certainly a fact that the monthly absolute humidity figure was 0.91 inch in July at the peak of the outbreak and in August when a secondary peak was noted; however, the average monthly absolute humidity figure was 0.67 inch for the year, was over 0.8 inch from May to September and never below the figure of 0.4 inch mentioned above.

Under the circumstances, it would be unwise to draw any very definite conclusions regarding the influence of climatic conditions on the incidence of cholera in Hong Kong, except to suggest that there was a tendency for outbreaks to occur at a period of the year when temperature and rainfall are usually higher than during other periods. P.S.S-C.

Appendix A.

Table I.

QUEEN MARY
MENTAL
KOWLOON
TSAN YUK
KENNEDY TOWN
} **HOSPITAL.**

RETURN OF DISEASES FOR THE YEAR 1938.

Appendix B.

Table II.

TUNG WAH
TUNG WAH EASTERN
KWONG WAH
} **CHINESE HOSPITAL.**

RETURN OF DISEASES FOR THE YEAR 1938.

Note:—The returns for the Government hospitals are given separately from those of the Chinese hospitals although both treat Chinese patients. The reason for this separation lies in the fact the Chinese hospitals are, for the most part, so overcrowded and short of qualified staff that it is very difficult to secure an accurate diagnosis of the cases of disease in a large proportion of those treated.

Appendix A. Table I.

Appendix B. Table II.

Diseases.	Government Hospitals.					Chinese Hospitals.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
I.—*Infectious & Parasitic Diseases.*										
1. Typhoid fever	4	110	27	114	12	3	179	59	182	4
2. Paratyphoid fevers	—	1	—	1	—	—	2	—	2	—
3. Typhus fever	—	1	—	1	—	—	—	—	—	—
4. Relapsing fever	—	—	—	—	—	—	—	—	—	—
5. Undulant fever	—	—	—	—	—	—	—	—	—	—
6. Small-pox :—										
(*a*) Variola major	14	844	361	858	11	—	*204	5	204	—
(*b*) Variola minor (alastrim)	—	—	—	—	—	—	2	2	2	—
7. Measles	5	70	4	75	1	—	258	94	258	4
8. Scarlet fever	1	1	—	2	1	—	—	—	—	—
9. Whooping cough	—	2	1	2	—	—	10	2	10	1
10. Diphtheria	4	62	21	66	8	1	168	115	169	1
11. Influenza	4	450	5	454	1	40	1,290	185	1,330	20
12. Cholera	—	522	276	522	3	—	*303	8	303	—
13. Dysentery :—										
(*a*) Amoebic	—	3	2	3	—	9	34	14	43	4
(*b*) Bacillary	3	126	11	129	—	8	567	201	575	29
(*c*) Other or unspecified	1	3	1	4	1	9	19	—	28	—
14. Plague :—										
(*a*) Bubonic	—	—	—	—	—	—	—	—	—	—
(*b*) Pneumonic	—	—	—	—	—	—	—	—	—	—
(*c*) Septicaemic	—	—	—	—	—	—	—	—	—	—
15. Erysipelas	—	5	—	5	—	—	21	3	21	2
16. Acute poliomyelitis	—	4	—	4	—	—	—	—	—	—
17. Encephalitis lethargica	—	—	—	—	—	—	5	4	5	—
18. Cerebro-spinal meningitis.	1	221	110	222	19	5	*297	98	302	—
19. Glanders	—	—	—	—	—	—	—	—	—	—
20. Anthrax	—	—	—	—	—	—	—	—	—	—
21. Rabies	—	—	—	—	—	—	—	—	—	—
22. Tetanus	—	4	3	4	—	2	46	19	48	—
23. Tuberculosis of the respiratory system	24	353	71	377	34	117	3,608	1,879	3,725	111
24. Tuberculosis of the central nervous system	—	30	30	30	—	3	193	164	201	1
25. Tuberculosis of intestines and peritoneum	—	12	5	12	—	—	22	17	22	1
26. Tuberculosis of vertebral column	3	12	—	15	—	—	11	—	11	—
Total carried forward	64	2,836	928	2,900	91	197	7,244	2,869	7,441	178

* These figures are based on cases admitted to the Chinese Hospitals and transferred thence to the Infectious Diseases Hospital.

Appendix A. Table I.

Appendix B. Table II.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	64	2,836	928	2,900	91	197	7,244	2,869	7,441	178
I.—*Infectious & Parasitic Diseases.—(Contd.)*										
27. Tuberculosis of other bones and joints	3	31	—	34	3	24	78	19	102	18
28. Tuberculosis of skin and subcutaneous tissues	1	—	—	1	—	—	8	4	8	2
29. Tuberculosis of the lymphatic system	—	8	1	8	—	10	21	—	31	—
30. Tuberculosis of genito-urinary system	—	5	—	5	—	—	—	—	—	—
31. Tuberculosis of other organs	—	—	—	—	—	1	10	4	11	—
32. Disseminated tuberculosis	3	22	18	25	—	15	15	30	30	—
33. Leprosy	62	276	17	338	133	—	11	—	11	—
34. Syphillis :—										
(*a*) Congenital	—	1	1	1	—	—	23	14	23	—
(*b*) Primary	—	1	—	1	—	5	—	—	5	—
(*c*) Secondary	—	5	—	5	—	2	4	—	6	—
(*d*) Tertiary	—	114	3	114	8	4	53	13	57	4
35. Other venereal diseases :—										
(*a*) Gonorrhoeal opthalmia	—	9	—	9	—	1	13	—	14	—
(*b*) Gonorrhoea	6	310	—	316	7	2	27	—	29	—
(*c*) Soft chancre	—	—	—	—	—	—	9	—	9	—
36. Purulent infection :—										
(*a*) Septicaemia	—	2	1	2	—	—	36	30	36	—
(*b*) Pyaemia	—	—	—	—	—	—	—	—	—	—
(*c*) Gas gangrene	—	1	1	1	—	—	—	—	—	—
37. Yellow fever	—	—	—	—	—	—	—	—	—	—
38. Malaria	—	56	—	56	1	—	—	—	—	—
(*a*) Benign tertian	3	202	—	205	2	22	456	1	478	11
(*b*) Quartan	—	14	1	14	—	—	10	1	10	—
(*c*) Sub-tertian	10	345	21	355	11	38	1,751	460	1,789	102
(*d*) Cachexia	3	96	3	99	1	3	34	21	37	4
39. Other diseases due to protozoa :—										
(*a*) Kala-azar	—	—	—	—	—	—	—	—	—	—
(*b*) Trypanosomiasis	—	—	—	—	—	—	—	—	—	—
(*c*) Yaws	—	—	—	—	—	—	—	—	—	—
40. Ankylostomiasis	3	68	2	71	1	1	36	1	37	3
41. Hydatid cysts	—	—	—	—	—	—	—	—	—	—
Total carried forward	153	4,402	997	4,560	258	325	9,839	3,467	10,164	322

Appendix A.
Table I.

Appendix B.
Table II.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	158	4,402	997	4,560	258	325	9,839	3,467	10,164	322
I.—*Infectious & Parasitic Diseases.—(Contd.)*										
42. Other diseases due to helminths :—										
(*a*) Ascariasis	2	86	—	83	2	4	66	—	70	—
(*b*) Filariasis	—	2	—	2	—	—	3	—	3	—
(*c*) Taeniasis	—	7	—	7	—	2	3	—	5	—
(*d*) Clonorchiasis	—	15	—	15	1	3	—	—	3	—
(*e*) Schistosomiasis	—	—	—	—	—	—	—	—	—	—
43. Mycoses :—										
(*a*) Actinomycosis	—	—	—	—	—	—		—	—	—
(*b*) Other mycoses (sprue	—	8	—	8	—	—	—	—	—	—
44. Other infectious or parasitic diseases :—										
(*a*) Vaccinia	—	—	—	—	—	—	—	—	—	—
(*b*) Other sequelae of vaccination	—	—	—	—	—	—	—	—	—	—
(*c*) German measles	—	14	—	14	—	—	—	—	—	—
(*d*) Varicella	1	20	—	21	—	—	21	3	21	—
(*e*) Mumps	—	13	—	13	1	—	34	1	34	1
(*f*) Dengue	1	8	—	9	1	—	—	—	—	—
(*g*) Glandular fever	—	—	—	—	—	—	—	—	—	—
(*h*) Blackwater fever ...	—	—	—	—	—	—	—	—	—	—
II—*Cancer and Other Tumours*										
45. Cancer or other malignant diseases of the buccal cavity, and pharynx	9	22	4	31	11	5	31	17	36	2
46. Cancer or other malignant tumours of the digestive organs, & peritoneum :—										
(*a*) Oesophagus	—	1	—	1	—	—	1	1	1	—
(*b*) Stomach & duodenum	—	7	3	7	—	—	29	14	29	1
(*c*) Rectum	—	4	2	4	—	—	7	5	7	—
(*d*) Liver and biliary passages	1	9	3	10	—	—	20	17	20	—
(*e*) Other digestive organs	—	13	3	13	2	—	—	—	—	—
47. Cancer or other malignant tumours of the respiratory organs	—	2	—	2	—	1	5	1	6	—
48. Cancer or other malignant tumours of the uterus ..	1	19	2	20	3	—	65	30	65	6
49. Cancer or other malignant tumours of other female genital organs	3	13	—	16	2	1	1	1	2	—
50. Cancer or other malignant tumours of the breast ...	3	38	1	41	4	—	66	22	66	4
Total carried forward	179	4,703	1,015	4,882	285	341	10,191	3,579	10,532	336

Appendix A.
Table I.

Appendix B.
Table II.

Diseases.	Government Hospitals.					Chinese Hospitals.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	179	4,703	1,015	4,882	285	341	10,191	3,579	10,532	336
II.—*Cancer and other Tumours. (Contd.)*										
51. Cancer or other malignant tumours of the male genito-urinary organs ...	2	7	1	9	2	—	6	1	6	3
52. Cancer or other malignant tumours of the skin	1	2	—	3	1	—	56	15	56	—
53. Cancer or other malignant tumours of organs not specified	1	12	4	13	2	—	2	—	2	1
54. Non-malignant tumours:—										
(*a*) Female genital organs	—	24	—	24	1	—	22	2	22	1
(*b*) Other sites	2	115	5	117	13	—	13	—	13	—
55. Tumours of undetermined nature :—										
(*a*) Female genital organs	—	11	—	11	—	—	—	—	—	—
(*b*) Other sites	—	—	—	—	—	—	3	—	3	3
III.—*Rheumatism, Diseases of Nutrition and of Endocrine Glands, and Other General Diseases.*										
56. Rheumatic fever	—	1	—	1	—	—	3	—	3	—
57. Chronic rheumatism, osteoarthritis :—										
(*a*) Chronic rheumatism.	2	19	—	21	—	12	61	7	73	5
(*b*) Rheumatoid arthritis	—	28	—	28	—	17	57	2	74	5
58. Gout	—	10	1	10	—	—	—	—	—	—
59. Diabetes mellitus	1	22	3	23	1	—	12	1	12	—
60. Scurvy	—	1	—	1	—	—	1	—	1	—
61. Beri-beri	8	166	22	174	6	269	5,207	1,863	5,476	215
62. Pellagra	—	—	—	—	—	—	—	—	—	—
63. Rickets	—	—	—	—	—	—	1	1	1	—
64. Osteomalacia	—	—	—	—	—	—	—	—	—	—
65. Diseases of the pituitary gland	—	—	—	—	—	—	—	—	—	—
66. Diseases of the thyroid and parathyroid glands :—										
(*a*) Simple goitre	—	—	—	—	—	—	2	—	2	—
(*b*) Exophthalmic goitre	5	20	2	25	4	—	3	—	3	—
(*c*) Myxoedema, cretinism	—	8	—	8	—	—	—	—	—	—
(*d*) Tetany	—	1	—	1	—	—	—	—	—	—
(*e*) Other diseases	—	12	—	12	—	—	1	—	1	—
67. Diseases of the thymus ..	—	—	—	—	—	—	—	—	—	—
Total carried forward	201	5,162	1,053	5,363	315	639	15,641	5,471	16,280	569

Appendix A.
Table I.

Appendix B.
Table II.

Diseases.	Government Hospitals.					Chinese Hospitals.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	201	5,162	1,053	5,363	315	639	15,641	5,471	16,280	569
III.—*Rheumatism, Diseases of Nutrition and of Endocrine Glands, and Other General Diseases.—(Contd.)*										
68. Diseases of the adrenal glands (excluding tuberculosis)	—	—	—	—	—	—	—	—	—	—
69. Other general diseases	—	17	1	17	2	18	—	—	18	—
IV.—*Diseases of the Blood and Blood Forming Organs.*										
70. Haemorrhagic conditions :—										
(*a*) Purpura	1	6	4	7	—	—	1	1	1	—
(*b*) Haemophilia	—	—	—	—	—	—	—	—	—	—
71. Anaemia, chlorosis :—										
(*a*) Pernicious anaemia...	—	2	—	2	—	16	—	—	16	—
(*b*) Other anaemias and chlorosis	1	23	1	24	1	2	56	4	58	1
(*i*) Splenic anaemia	—	—	—	—	—	—	—	—	—	—
(*ii*) Others	1	—	—	1	—	29	26	1	55	—
72. Leukaemia, aleukaemia :—										
(*a*) Leukaemia	—	2	1	2	—	—	—	—	—	—
Chronic myeloid	—	—	—	—	—	—	1	—	1	—
Chronic lymphatic...	—	—	—	—	—	—	—	—	—	—
Acute	—	—	—	—	—	—	—	—	—	—
Multiple myeloma ...	—	—	—	—	—	—	—	—	—	—
(*b*) Aleukaemia (lymphadenoma)	—	—	—	—	—	—	—	—	—	—
73. Diseases of the spleen :—										
(*a*) Banti's disease	—	—	—	—	—	—	—	—	—	—
(*b*) Other diseases of the spleen	1	20	1	21	2	—	27	1	27	2
74. Other diseases of the blood and blood forming organs	—	—	—	—	—	—	—	—	—	—
V.—*Chronic Poisoning.*										
75. Alcoholism (acute or chronic)	—	28	—	28	—	—	—	—	—	—
76. Chronic poisoning by other organic substances :—										
Opium habit	—	80	3	80	2	39	1,465	34	1,504	10
Morphine habit	—	—	—	—	—	—	—	—	—	—
Others	—	38	—	38	3	4	1	—	5	—
77. Chronic poisoning by mineral substances :—										
(*a*) Occupational lead poisoning	—	—	—	—	—	—	—	—	—	—
(*b*) Other chronic poisoning by mineral	—	—	—	—	—	—	—	—	—	—
Total carried forward	205	5.378	1.064	5.583	325	747	17 213	5,512	17,965	582

Appendix A.
Table I.

Appendix B.
Table II.

Diseases.	Government Hospitals.					Chinese Hospitals.				
		Yearly total.					Yearly total.			
	Remaining in hospital at end of 1937.	Admissions.	Deaths.	Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Admissions.	Deaths.	Total Cases Treated.	Remaining in hospital at end of 1938.
Carried forward	205	5,378	1,064	5,583	325	747	17.218	5,512	17,965	582
VI.—*Diseases of the Nervous System and Sense Organs.*										
78. Encephalitis :—										
(*a*) Cerebral abscess	—	—	—	—	—	—	—	—	—	—
(*b*) Others	—	3	1	3	—	—	1	—	1	—
79. Meningitis (does not include C.S.M.)	—	11	11	11	—	1	22	1	23	—
80. Tabes dorsalis (locomotor ataxy)	3	9	—	12	—	—	12	3	12	4
81. Other diseases of the spinal cord :—										
(*a*) Progressive muscular atrophy	—	—	—	—	—	—	—	—	—	—
(*b*) Subacute combined sclerosis	—	—	—	—	—	—	—	—	—	—
(*c*) Myelitis of unstated origin	1	2	—	3	—	—	16	3	16	—
(*d*) Other diseases included under 81 ...	—	1	—	1	1	—	—	—	—	—
82. Cerebral haemorrhage, apoplexy, etc :—										
(*a*) Cerebral haemorrhage	—	31	25	31	1	2	253	129	255	7
(*b*) Cerebral embolism and thrombosis	—	4	1	4	—	2	73	13	75	2
(*c*) Hemiplegia and other paralysis of unstated origin	1	33	1	34	3	4	202	39	206	6
83. General paralysis of the insane	1	16	3	17	8	—	—	—	—	—
84. Other forms of insanity :—										
(*a*) Dementia praecox ..	11	50	—	61	19	—	—	—	—	—
(*b*) Others	44	368	29	412	88	—	12	1	12	—
85. Epilepsy	—	26	1	26	—	3	69	4	72	1
86. Infantile convulsions	1	1	1	2	—	—	32	—	32	—
87. Other diseases of the nervous system :—										
(*a*) Chorea	—	—	—	—	—	—	—	—	—	—
(*b*) Neuritis, neuralgia...	8	40	—	48	5	193	1,020	4	1,213	72
(*c*) Paralysis agitans	—	—	—	—	—	—	28	—	28	4
(*d*) Disseminated sclerosis	—	2	—	2	—	—	—	—	—	—
(*e*) Hysteria	—	3	—	3	—	—	13	—	13	2
(*f*) Neurasthenia	—	1	—	1	1	—	37	—	37	5
(*g*) Others	—	23	—	23	—	—	4	2	4	1
88. Diseases of the eye :—										
(*a*) Conjunctivitis	1	42	—	43	2	2	61	—	63	8
(*b*) Trachoma	—	36	—	36	2	9	34	—	43	1
(*c*) Corneal ulcer	—	29	—	29	—	2	23	—	25	—
(*d*) Other diseases	16	100	—	116	8	15	592	—	607	17
Total carried forward	292	6,209	1,137	6,501	463	980	19.722	5,711	20,702	712

Appendix A. Table I.

Appendix B. Table II.

Diseases.	Government Hospitals.					Chinese Hospitals.				
	Remaining in hospital at end of 1937.	Yearly total. Admissions.	Yearly total. Deaths.	Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total. Admissions.	Yearly total. Deaths.	Total Cases Treated.	Remaining in hospital at end of 1938.
Brought forward	292	6,209	1,137	6,501	463	980	19,722	5,711	20,702	712
VI.—*Diseases of the Nervous System and Sense Organs—(Contd.)*										
89. Diseases of the ear and of the mastoid sinus :—										
(*a*) Otitis externa	2	23	—	25	4	—	—	—	—	—
(*b*) Otitis media	—	5	—	5	—	—	11	—	11	1
(*c*) Mastoiditis	2	38	1	40	2	—	7	—	7	2
(*d*) Others	—	2	—	2	—	—	2	—	2	—
VII.—*Diseases of the Circulatory System.*										
90. Pericarditis	—	1	1	1	—	—	—	—	—	—
91. Acute endocarditis :—										
(*a*) Malignant endocarditis	—	2	2	2	—	—	10	3	10	—
(*b*) Other acute endocarditis	—	—	—	—	—	2	11	5	13	1
92. Chronic endocarditis, valvular disease :—										
(*a*) Aortic valve disease	—	23	3	23	—	8	57	16	65	2
(*b*) Mitral valve disease	4	29	1	33	4	14	337	116	351	11
(*c*) Aortic and mitral valve disease	—	—	—	—	—	—	—	—	—	—
(*d*) Endocarditis not returned as acute or chronic	—	—	—	—	—	—	—	—	—	—
(*e*) Other or unspecified valve disease	—	12	1	12	2	—	3	2	3	—
93. Diseases of the myocardium :—										
(*a*) Acute myocarditis	—	5	4	5	1	1	—	—	1	—
(*b*) Myocardial degeneration	4	30	5	34	2	9	604	382	613	9
94. Diseases of the coronary arteries :—										
(*a*) Angina pectoris	—	5	—	5	—	—	—	—	—	—
(*b*) Coronary sclerosis	—	—	—	—	—	—	—	—	—	—
95. Other diseases of the heart :—										
(*a*) Disordered action of heart	—	16	8	16	2	—	10	—	10	2
(*b*) Other diseases included under 95	1	14	9	15	1	—	13	2	13	1
96. Aneurysm	2	10	—	12	1	—	8	—	8	—
97. Arterio-sclerosis	—	5	—	5	—	—	—	—	—	—
98. Gangrene	—	12	2	12	2	—	29	15	29	2
99. Other diseases of the arteries	—	—	—	—	—	—	—	—	—	—
Total carried forward	307	6,441	1,174	6,748	484	1.014	20,824	6,252	21,838	743

Appendix A. Table I. — Appendix B. Table II.

Diseases.	Government Hospitals.					Chinese Hospitals.				
	Remaining in hospital at end of 1937.	Yearly Total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly Total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	307	6,441	1,174	6,748	484	1,014	20,824	6,252	21,838	743
VII.—*Diseases of the Circulatory System.* —(*Contd.*)										
100. Diseases of the veins :—										
(*a*) Varicose veins	—	11	—	11	—	—	—	—	—	—
(*b*) Haemorrhoids	5	35	—	40	5	6	124	—	130	12
(*c*) Phlebitis	—	3	—	3	—	—	—	—	—	—
(*d*) Thrombosis	—	1	—	1	—	—	4	—	4	1
(*e*) Others	—	19	—	19	—	—	—	—	—	—
101. Diseases of the lymphatic system, (lymphangitis, etc.)	—	100	2	100	4	12	25	—	37	3
102. Abnormalities of blood pressure :—										
(*a*) Arterial hypertension	1	8	—	9	—	—	—	—	—	—
(*b*) Arterial hypotension	—	—	—	—	—	—	—	—	—	—
103. Other diseases of the circulatory system	—	24	—	24	—	—	—	—	—	—
VIII.—*Diseases of the Respiratory System.*										
104. Diseases of the nasal fossae and annexa :—										
(*a*) Diseases of the nose	—	41	—	41	3	1	11	—	12	—
(*b*) Diseases of the accessory nasal sinuses	2	42	—	44	5	—	22	3	22	—
105. Diseases of the larynx :—										
(*a*) Laryngismus stridulus	—	1	—	1	—	—	—	—	—	—
(*b*) Laryngitis	1	6	—	7	—	2	3	—	5	—
(*c*) Other diseases of the larynx	—	—	—	—	—	—	—	—	—	—
106. Bronchitis :—										
(*a*) Acute bronchitis	1	130	4	131	10	28	1,080	302	1,108	19
(*b*) Chronic bronchitis ..	—	47	3	47	5	14	2,343	460	2,357	57
(*c*) Bronchitis not distinguished as acute or chronic	2	65	3	67	4	21	96	3	117	3
107. Broncho-pneumonia	2	165	108	167	1	21	3,213	2,446	3,234	42
108. Lobar pneumonia	5	81	47	86	3	4	1,211	450	1,215	16
109. Pneumonia (not otherwise defined)	—	11	2	11	—	7	136	100	143	—
110. Pleurisy :—										
(*a*) Empyema	4	26	4	30	4	—	17	2	17	2
(*b*) Other pleurisy	1	28	1	29	7	—	27	4	27	2
Total carried forward	331	7,285	1,348	7,616	535	1,130	29,136	10.022	30,265	900

Appendix A.
Table I.

Appendix B.
Table II.

Diseases.	Government Hospitals.					Chinese Hospitals.				
	Remaining in hospital at end of 1937.	Yearly total		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward ……	331	7,285	1,348	7,616	535	1,130	29,136	10,022	30,266	900
VIII.—*Diseases of the Respiratory System.* —(*Contd.*)										
111. Congestion and haemorrhagic infarct of lung, etc :—										
(*a*) Hypostatic congestion of lungs ………	—	1	1	1	—	—	—	—	—	—
(*b*) Other diseases included under 111 …	—	1	1	1	—	—	2	2	2	—
112. Asthma ………	—	77	1	77	—	8	217	13	225	—
113. Pulmonary emphysema ….	—	1	1	1	—	—	1	1	1	—
114. Other diseases of the respiratory system :—										
(*a*) Chronic interstitial pneumonia, including occupational disease of the lung..	—	—	—	—	—	—	—	—	—	—
(*b*) Other diseases included in 114 :—										
(1) Gangrene of the lung ………	—	14	6	14	2	—	—	—	—	—
(2) Other diseases included under 114*b* ………	—	—	—	—	—	—	—	—	—	—
IX.—*Diseases of the Digestive System.*										
115. Diseases of the buccal cavity, pharynx etc :—										
(*a*) Diseases of the teeth and gums ………	1	156	2	157	2	—	101	9	101	7
(*b*) Ludwig's angina …..	—	—	—	—	—	—	2	2	2	—
(*c*) Diseases of the tonsils ………	6	287	1	293	3	—	92	3	92	—
(*d*) Other diseases included in 115 ………	—	39	1	39	1	—	—	—	—	—
116. Diseases of the oesophagus	—	2	—	2	—	—	—	—	—	—
117. Ulcer of the stomach or duodenum :—										
(*a*) Ulcer of the stomach	3	44	7	47	3	—	150	72	150	19
(*b*) Ulcer of the duodenum ………	2	41	1	43	2	—	70	9	70	1
118. Other diseases of the stomach :—										
(*a*) Inflammation of the stomach ………	1	61	—	62	3	25	171	12	196	1
(*b*) Other diseases included in 118 ………	1	82	1	83	3	6	301	137	307	11
119. Diarrhoea and enteritis (under 2 years) ………	1	86	26	87	2	33	772	573	805	10
Total carried forward ……	346	8,177	1.397	8,523	556	1.202	31.015	10,855	32.217	949

Appendix A.
Table I.

Appendix B.
Table II.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	346	8,177	1,397	8,523	556	1,202	31,015	10,855	32,217	949
IX.—*Diseases of the Digestive System.* —(*Contd.*)										
120. Diarrhoea and enteritis (2 years and over) :—										
(*a*) Colitis	2	281	11	283	3	8	208	23	216	3
(*b*) Otherwise defined ...	—	39	—	39	1	35	2,583	1,052	2,558	65
121. Appendicitis	10	103	4	113	6	2	54	20	56	3
122. Hernia, intestinal obstruction :—										
(*a*) Hernia	4	51	2	55	1	2	103	4	105	3
(*b*) Intestinal obstruction	—	14	9	14	2	—	44	12	44	—
123. Other diseases of the intestines :—										
(*a*) Constipation	1	70	—	71	—	1	95	—	96	3
(*b*) Diverticulitis	—	—	—	—	—	—	—	—	—	—
(*c*) Others included under 123	2	17	—	19	1	—	87	3	87	2
124. Cirrhosis of the liver :—										
(*a*) Returned as alcoholic	—	2	—	2	—	—	—	—	—	—
(*b*) Not returned as alcoholic	2	7	2	9	2	1	539	58	540	7
125. Other diseases of the liver :—										
(*a*) Acute yellow atrophy	—	—	—	—	—	—	—	—	—	—
(*b*) Others included under 125	—	—	—	—	—	—	48	4	48	5
Amoebic abscess..	—	5	4	5	—	—	—	—	—	—
Hepatitis	—	2	—	2	—	—	9	1	9	—
126. Biliary calculi	—	14	1	14	1	—	4	—	4	—
127. Other diseases of the gall bladder and ducts	1	41	2	42	—	—	6	—	6	—
128. Diseases of the pancreas.	—	2	1	2	—	—	1	1	1	—
129. Peritonitis without stated cause	2	37	11	39	—	—	33	18	33	3
X.—*Non-Venereal Diseases of the Genito-Urinary System and Annexa.*										
130. Acute nephritis	1	21	6	22	—	9	659	141	668	4
131. Chronic nephritis	2	34	4	36	3	27	1,067	276	1,094	35
132. Nephritis not stated to be acute or chronic	—	27	6	27	2	18	279	103	297	13
Total carried forward	373	8,944	1,460	9,317	578	1.305	36,834	12,571	38,079	1,095

Appendix A. Table I.

Appendix B. Table II.

Diseases.	GOVERNMENT HOSPITALS. Remaining in hospital at end of 1937.	Yearly total. Admissions.	Yearly total. Deaths.	Total Cases Treated.	Remaining in hospital at end of 1938.	CHINESE HOSPITALS. Remaining in hospital at end of 1937.	Yearly total. Admissions.	Yearly total. Deaths.	Total Cases Treated.	Remaining in hospital at end of 1938.
Brought forward	373	8,944	1,460	9,317	578	1,305	36,834	12,571	38,079	1,095
X.—*Non-Veneral Diseases of the Genito-Urinary System and Annexa.*—(*Contd.*)										
133. Other diseases of the kidney and annexa :—										
(*a*) Pyelitis	—	44	1	44	2	—	7	3	7	—
(*b*) Other diseases included under 133 ..	—	47	1	47	2	—	30	9	30	—
134. Calculi of the urinary passages :—										
(*a*) Calculi of kidney and ureter	1	30	—	31	3	—	3	—	3	—
(*b*) Calculi of the bladder	3	29	1	32	4	3	44	—	47	3
(*c*) Calculi of unstated site	—	—	—	—	—	—	3	—	3	—
135. Diseases of the bladder :—										
(*a*) Cystitis	1	28	—	29	—	4	60	4	64	2
(*b*) Other diseases of the bladder	—	24	—	24	—	2	18	—	20	—
136. Diseases of the urethra, urinary abscess, etc :—										
(*a*) Stricture of the urethra	1	13	—	14	—	—	57	2	57	—
(*b*) Other diseases of the urethra, etc. ...	1	40	—	41	1	—	39	—	39	1
137. Diseases of the prostate ..	—	7	—	7	1	—	4	—	4	—
138. Diseases of the male genital organs :—										
(*a*) Phimosis	1	51	—	52	3	1	26	—	27	—
(*b*) Paraphimosis	—	11	—	11	—	—	17	—	17	—
(*c*) Hydrocele	—	46	—	46	1	—	27	—	27	1
139. Diseases of the female genital organs :—										
(*a*) 1. Diseases of the ovary	3	41	1	44	3	—	5	1	5	1
2. Diseases of the fallopian tube	—	45	—	45	3	—	15	1	15	1
3. Diseases of the parametrium	1	25	—	26	—	—	33	—	33	1
(*b*) Diseases of the uterus	3	283	—	236	5	—	128	1	128	2
(*c*) Diseases of the breast	—	36	—	36	2	1	36	—	37	—
(*d*) Other diseases of the female genital organs.	6	111	—	117	2	—	2	—	2	2
XI.—*Diseases of Pregnancy, Childbirth and the Puerperal State.*										
140. Post-abortive sepsis :— Septic abortion	—	3	—	3	—	—	—	—	—	—
Total carried forward	394	9,858	1,464	10.252	610	1,316	37,388	12,592	38.644	1,109

Appendix A. Table I.

Appendix B. Table II.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	394	9,858	1,464	10,252	610	1,316	37,388	12,592	38,644	1,109
XI.—*Diseases of Pregnancy, Childbirth and the Puerperal State.—(Contd.)*										
141. Abortion not returned as septic :—										
(*a*) Haemorrhage following abortion	—	131	3	131	2	—	92	—	92	—
(*b*) Without record of haemorrhage	—	8	—	8	—	—	9	—	9	1
142. Ectopic gestation	1	9	3	10	—	1	17	4	18	---
143. Other accidents of pregnancy	—	13	—	13	—	—	38	—	38	—
144. Puerperal haemorrhage :—										
(*a*) Placenta praevia	1	23	4	24	—	—	48	10	48	—
(*b*) Other puerperal haemorrhage	3	45	3	48	—	—	29	8	29	—
145. Puerperal sepsis :—										
(*a*) Puerperal septicaemia and pyaemia	—	6	3	6	1	—	26	4	26	1
(*b*) Puerperal tetanus ...	2	50	—	52	—	—	—	—	—	—
146. Puerperal albuminuria and convulsions :—										
(*a*) Puerperal convulsions	2	17	—	19	1	1	9	5	10	—
(*b*) Other conditions included in 146	1	2	1	3	—	—	25	7	25	—
147. Other toxaemias of pregnancy	—	6	1	6	—	2	11	1	13	—
148. Puerperal phlegmasia alba dolens, embolism and sudden death :—										
Puerperal phlegmasia alba dolens not returned as septic..	—	—	—	—	—	—	—	—	—	—
Puerperal embolism and sudden death...	—	—	—	—	—	—	—	—	—	—
149. Conditions associated with labour :—										
(*a*) Normal labour	67	4,355	—	4,422	82	84	6.723	1	6,807	107
(*b*) Accidents of childbirth	3	30	—	33	—	—	—	—	—	—
(*c*) False labour	—	363	—	363	—	—	—	—	—	—
150. Other or unspecified conditions of the puerperal state :—										
(*a*) Puerperal insanity...	—	—	—	—	—	—	—	—	—	—
(*b*) Puerperal diseases of the breast	—	60	—	60	—	—	—	—	—	—
Total carried forward	474	14,976	1,482	15.450	696	1,404	44.415	12,632	45,759	1,218

Appendix A. Table I.

Appendix B. Table II.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remaining in hospital at end of 1937.	Yearly total. Admissions.	Yearly total. Deaths.	Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total. Admissions.	Yearly total. Deaths.	Total Cases Treated.	Remaining in hospital at end of 1938.
Brought forward ……	474	14,976	1,482	15,450	696	1,404	44,415	12,632	45,759	1,218
XII.—*Diseases of the Skin and Cellular Tissue.*										
151. Carbuncle, boil ……	5	170	3	175	4	4	90	13	94	6
152. Cellulitis, acute abscess :—										
(*a*) Cellulitis ……	3	118	4	121	5	12	422	66	434	9
(*b*) Acute abscess ……	13	406	1	419	5	32	1,414	53	1,446	75
153. Other diseases of the skin and its annexa ……	14	380	—	394	13	10	460	—	470	78
XIII.—*Diseases of the Bones and Organs of Locomotion.*										
154. Acute infective osteomyelitis and periostitis ……	7	19	—	26	2	5	25	3	25	3
155. Other diseases of the bones ……	—	28	1	28	—	4	30	—	34	2
156. Diseases of the joints and other organs of locomotion :—										
(*a*) Diseases of the joints	3	72	3	75	2	5	48	2	53	13
(*b*) Diseases of other organs of locomotion	1	53	1	54	1	—	—	—	—	—
XIV.—*Congenital Malformations*										
157. Congenital malformations :—										
(*a*) Congenital hydrocephalus ……	—	2	1	2	—	2	15	6	17	—
(*b*) Spina bifida and meningocele ……	—	—	—	—	—	—	—	—	—	—
(*c*) Congenital malformation of heart ……	—	7	2	7	2	—	10	2	10	—
(*d*) Monstrosities ……	—	—	—	—	—	—	—	—	—	—
(*e*) Other congenital malformations ……	3	17	6	20	3	—	8	3	8	—
XV.—*Diseases of Early Infancy.*										
158. Congenital debility ……	1	21	11	22	1	3	266	216	269	8
159. Premature birth ……	—	12	12	12	—	1	125	116	126	1
160. Injury at birth ……	—	4	2	4	1	—	—	—	—	—
Total carried forward ……	524	16.285	1,529	16.809	735	1,482	47.328	13.112	48,745	1,413

Appendix A.
Table I.

Appendix B.
Table II.

Diseases.	Government Hospitals.					Chinese Hospitals.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	524	16,285	1,529	16,809	735	1,482	47,328	13,112	48,745	1,413
XV.—*Diseases of Early Infancy.*—(*Contd.*)										
161. Other diseases peculiar to early infancy :—										
(*a*) Atelectasis	—	6	5	6	—	—	4	3	4	—
(*b*) Icterus neonatorum...	—	—	—	—	—	—	3	3	3	—
(*c*) Other diseases included in 161	—	—	—	—	—	—	—	—	—	—
Diseases of the umbilicus	—	2	1	2	—	—	—	—	—	—
Pemphigus neonatorum	—	—	—	—	—	—	—	—	—	—
Others included under 161c.	—	—	—	—	—	—	—	—	—	—
XVI.—*Old Age.*										
162. Old Age :—										
(*a*) Senile dementia	—	—	—	—	—	—	—	—	—	—
(*b*) Other forms of senile decay	1	38	2	39	1	20	1,239	513	1,259	82
XVII.—*Conditions Associated with Violence.*										
163. Suicide, or attempted suicide, by poisoning (including corrosive poisoning)	1	131	21	132	3	—	27	—	27	—
164. Suicide, or attempted suicide, by gas poisoning	—	—	—	—	—	—	—	—	—	—
165. Suicide, or attempted suicide, by hanging or strangulation	—	—	—	—	—	—	—	—	—	—
166. Suicide, or attempted suicide, by drowning	—	81	—	81	1	1	4	—	5	—
167. Suicide, or attempted suicide, by firearms	—	20	1	20	—	—	—	—	—	—
168. Suicide, or attempted suicide, by cutting or piercing instruments	—	3	—	3	—	—	—	—	—	—
169. Suicide, or attempted suicide, by jumping from a height	—	7	4	7	—	—	—	—	—	—
170. Suicide, or attempted suicide, by crushing	—	—	—	—	—	—	—	—	—	—
171. Suicide, or attempted suicide, by other means	—	3	—	3	—	—	—	—	—	—
172. Infanticide	—	—	—	—	—	—	—	—	—	—
Total carried forward	526	16,576	1,563	17,102	740	1,503	48,605	13,631	50,043	1,495

Appendix A.
Table I.

Appendix B.
Table II.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	526	16,576	1,563	17,102	740	1,503	48,605	13,631	50,043	1,495
XVII.—*Conditions Associated with Violence.*—(*Contd.*)										
173. Assault or homicide, by firearms	—	2	—	2	—	—	1	—	1	—
174. Assault or homicide, by cutting or piercing instruments	—	522	1	522	10	—	—	—	—	—
175. Assault or homicide, by other means	—	206	2	206	4	—	1	—	1	—
176. Attacks by venomous animals :—										
(*a*) Snake bite	—	7	—	7	—	—	—	—	—	—
(*b*) Insect bite	—	8	—	8	—	—	1	—	1	—
(*c*) Others	—	—	—	—	—	—	15	—	15	—
177. Food poisoning	—	40	—	40	—	—	16	1	16	—
178. Accidental absorption of irrespirable or poisonous gas	—	—	—	—	—	—	—	—	—	—
179. Other acute accidental poisoning	—	4	—	4	1	—	—	—	—	—
180. Injuries due to conflagration	—	—	—	—	—	—	—	—	—	—
181. Accidental burns :— (conflagration excepted)—										
(*a*) Burns by fire	—	60	6	60	1	2	18	—	20	—
(*b*) Scalds	3	153	7	156	4	2	60	2	62	3
(*c*) Burns by corrosive substances	—	7	—	7	3	—	—	—	—	—
(*d*) Dermatitis due to sun	—	—	—	—	—	—	—	—	—	—
(*e*) Dermatitis due to exposure to other forms of radiation...	—	—	—	—	—	—	—	—	—	—
182. Accidental mechanical suffocation	—	—	—	—	—	—	—	—	—	—
183. Accidental immersion or drowning	—	8	—	8	—	—	4	—	4	—
184. Accidental injury by firearms	—	48	8	48	10	65	126	—	191	9
185. Accidental injury by cutting or piercing instruments	12	74	8	86	10	3	44	—	47	6
186. Accidental injury by fall, crushing, etc. (This title includes all accidental deaths from injuries by falling, on railways, by vehicles, by machinery, by landslides, etc.).	69	2,332	142	2,401	80	28	399	1	427	30
Total carried forward	610	20,047	1,737	20,657	863	1,603	49,290	13,635	50,828	1,543

Appendix A.
Table I.

Appendix B.
Table II.

Diseases.	GOVERNMENT HOSPITALS.					CHINESE HOSPITALS.				
	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.	Remaining in hospital at end of 1937.	Yearly total.		Total Cases Treated.	Remaining in hospital at end of 1938.
		Admissions.	Deaths.				Admissions.	Deaths.		
Brought forward	610	20,047	1,737	20,657	863	1,603	49,290	13,635	50,828	1,543
XVII.—*Conditions Associated with Violence.*—(*Contd.*)										
187. Cataclysm .... (This title includes all deaths from cyclones, volcanic eruptions, tidal waves, earthquakes or tornadoes).	—	—	—	—	—	—	—	—	—	—
188. Injury by animals (poisoning by venomous animals excepted)	—	15	—	15	2	—	—	—	—	—
189. Hunger or thirst	—	—	—	—	—	—	35	—	35	—
190. Excessive cold	—	—	—	—	—	—	—	—	—	—
191. Excessive heat	—	2	—	2	—	—	2	—	2	—
192. Lightning	—	—	—	—	—	—	—	—	—	—
193. Electricity	—	1	—	1	—	—	—	—	—	—
194. Other and unstated forms of accidental violence :—										
Inattention at birth	—	—	—	—	—	—	—	—	—	—
Other causes included under 194	—	84	21	84	1	—	—	—	—	—
195. Violence of an unstated nature—(*i.e.* accidental, suicidal, etc.)	—	2	—	2	—	—	—	—	—	—
196. Wounds of war	—	36	4	36	2	—	—	—	—	—
197. Execution of civilians by belligerent armies	—	—	—	—	—	—	—	—	—	—
193. Execution	—	—	—	—	—	—	—	—	—	—
XVIII.—*Ill-Defined Diseases.*										
199. Sudden death	—	—	—	—	—	—	—	—	—	—
200. Cause of death unstated or ill-defined :—										
(*a*) Heart failure	—	—	—	—	—	—	—	—	—	—
(*b*) Other ill-defined causes	—	—	—	—	—	—	—	—	—	—
(*c*) Cause not specified...	—	—	—	—	—	—	—	—	—	—
201. Under observation	4	275	—	279	—	—	29	—	29	4
202. Malingering	—	1	—	1	—	—	1	—	1	—
203. Persons accompanying patients	—	—	—	—	—	—	—	—	—	—
204. Basal cerebral haematoma..	—	1	1	1	—	—	—	—	—	—
Total	614	20,464	1,763	21,078	868	1,603	49,357	13,635	50,895	1,547

Appendix C.

REPORT OF THE REGISTRAR-GENERAL OF BIRTHS & DEATHS.

1. *Population.*

1. A very real difficulty arises in determining the Chinese population of Hong Kong owing to the geographical relationship of the Colony to China and the fact that there is no effective control over immigration or emigration.

2. Hence, with the exception of actual census years, it may be taken for granted that any estimates of population made in accordance with current methods are liable to be rather wide of the mark.

3. The population at mid-year 1938 based upon the arithmetical increase between the census of 1921 and that of 1931 is calculated as being 1,028,619.

4. This figure takes no cognisance of the very large number of refugees who have sought asylum in these territories since the commencement of Sino-Japanese hostilities in July, 1937. There are some grounds for believing that, at the most conservative estimate, 100,000 refugees were added to the population during the last half of 1937. Various figures are available in regard to the surplus of immigrants (for the most part refugees) over emigrants for 1938.

5. For example, it is known that in 1938 the actual number of passengers arriving by rail and by the more important class of steamships from which reliable figures are obtainable exceeded departures by the same means by 188,039. The port health authorities who are in a position to make an approximate estimate which includes forms of marine transport like launches, sampans, and so on, give the figure 226,874 as the increment for 1938.

6. In addition to this, it must be remembered that a very considerable influx of refugees entered the Colony on foot over land frontiers; although the bulk of this class came over in three major waves in the last three months of the year following upon military operations on the Kwantung-New Territory border. The bulk of this last addition would, of course, not effect the actual mid-year population, but would so influence the number of births and deaths registered during the last half of 1938 as to render it unwise to neglect the accretion in determining birth-and death-rates. If an arbitrary figure of 100,000 is taken for the number of arrivals by land routes over and above departures in a similar manner, it will be seen that the population of the Colony in 1938 was very approximately as follows:—

Table I.

On basis of census estimation	1,028,619
Estimated surplus of immigrants over emigrants in 1937	100,000
Surplus by rail and sea in 1938	226,874
Estimated surplus over land frontiers in 1938	100,000
Total	1,455,493

7. It might be of interest to compare this figure with those derived from calculations based upon the birth-and death-rates for the census year 1931. Assuming that these rates proved constant—an unwarranted assumption in point of fact—the 1938 population calculated on the birth-rate would number 1,185,700, while that on a similar death-rate would amount to 1,152,500. It is unnecessary to point out the fallacy of such method in view of the peculiar circumstances prevailing.

8. Another method—suggested by the Statistician Major P. Granville Edge, O.B.E.—would be to take the ratio of school children to population in the census year and, knowing the number of school children in 1938, to base the calculation on the understanding that the ratio would remain constant. A figure of 1,561,229 is obtained in this way but is liable to somewhat wide error in view of the fact that, with minor exceptions, the vast proportion of the refugees belonged to the lowest economic class who are unable to take advantage of schools—free education being practically unknown as yet in Hong Kong. Yet another method also suggested by the same learned authority would be to base the calculation on the amount of water used per capita assuming the ratio in a census year to be the same as in 1938. On this basis, the estimated population in the year under review would amount to 1,500,216. However, this calculation is completely vitiated by the fact that the year was so abnormally dry as to make it necessary for very rigid restrictions to be placed upon the draw off both in dwellings and at the public standpipes.

9. Reference has already been made in another portion of this Report to the serious overcrowding of tenements and to the fact that the normal counts of persons per floor has risen from about seventeen-twenty to as high as sixty. In other words, the particular section of the population living in tenements has increased three-fold. Although it forms a large proportion of the total population, it would hardly be fair to assume that the population as a whole had been multiplied thrice.

10. Similar calculations determined by the normal house population in, say, 1931 and by the increase in house property in the intervening period are obviously vitiated by reason of the overcrowding factor in respect of individual houses.

11. From the foregoing it will have been appreciated that a very real difficulty exists in determining at all accurately the present population of these territories, and, hence in calculating birth-and-death-rates.

12. To meet this situation, it has been decided to calculate rates upon three premises firstly, according to the population ascertained on the normal rate of increase prevailing in an intercensal period*, secondly, on the addition of a very approximate figure representing the surplus of immigrants over emigrants during the period July 1st, 1937 to June 30th, 1938, amounting to 200,000; and, thirdly, by assuming that the birth-rate in the year under review was the same as in the census year 1931 for which an accurate population figure is obtainable. For ease of reference, these three rates will be described as A, B, C respectively.

13. Nearly ninety-eight per centum of the population belong to the Chinese race.

14. Table II gives particulars of the population based on method A detailed above arranged on a geographical basis.

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* a figure of 100,000 being added as representing the maritime population which was not accurately determined in 1931.

Table II.

	Census 1921	Census 1931	Estimated at mid-year 1938
Island of Hong Kong			
Non-Chinese	9,454	9,696	9,871
Chinese	337,947	399,507	444,138
Kowloon Peninsula			
Non-Chinese	3,186	7,925	11,361
Chinese	120,262	255,095	352,849
New Territories			
Non-Chinese	216	376	492
Chinese	82,947	97,781	108.536
Maritime			
*Non-Chinese	1.942	1,372	1,372
†Chinese	69.212	68,721	100,000
Total Non-Chinese	14,798	19,369	23.096
,, Chinese	610,368	821,104	1,005,523
Totals	625,166	840,473	1,028,619

* The decrease in Non-Chinese maritime population between the years 1921 and 1931 is considered to be due to the slump which Hong Kong was suffering from at that time and in the circumstances it is not considered that the decrease has been maintained. The 1931 figure has therefore been retained.

† It will be seen from the above figures that there was a slight decrease in the maritime population between the years 1921 and 1931. This was due to the fact that many were not counted in 1931, and a figure of 100,000 has been taken for some years past as a more accurate estimation of this section of the population.

2. *Births and birth-rates.*

15. In 1938 the number of births registered at some eighteen register offices amounted to 35,893 of which 558 were non-Chinese. This compares with 32,303 of which 692 were non-Chinese in 1937.

16. The following table provides a means of comparison with previous years :—

Table III.

Year	1934	1935	1936	1937	1938
Males	11,316	13,496	15,064	17,559	19,183
Females	9,570	11,541	12.319	14,744	16,710
Persons	20,886	25,037	27.383	32,303	35,893

17. The crude, uncorrected birth-rates for the population as a whole calculated according to the three methods explained in the preceding section and compared with the previous year are as follows :—

Table IV.

	1937						1938					
	Method						Method					
	A		B		C		A		B		C	
	Pop'n.	Rate	Pop'n.	Rate	Pop'n.	Rate	Pop'n.	Rate	Pop'n.	Rate	Pop'n.	Rate
Whole Population ...	1,075,040	30.1	1,075,040	30.1	1,067,959	30.3	1,096,571	32.7	1,275,040	28.2	1,093,241	32.8
Chinese	1,052,813	30.02	1,052,813	30.02	1,043,717	30.3	1,073,888	32.9	1,248,678	28.3	1,069,942	33.02
Non-Chinese ...	22,227	31.2	22,227	31.2	24,242	28.6	22,683	24.6	26,362	21.2	23,299	23.9

3. *Deaths and death-rate.*

18. In the same period the number of deaths registered in the civilian population rose from 34,635 in 1937 to 38,818 in 1938, an increase of 4,183.

19. Table V affords a means of comparison with previous years.

Table V.

Year	1934	1935	1936	1937	1938
Males	10,464	12,059	14,681	20,233	21,916
Females	8,402	9,290	10,683	14,392	16,874
Sex unknown.	19	18	16	10	28
Persons*	18,885	21,367	25,380	34,635	38,818

20. In addition twenty-nine deaths were recorded among the Forces of the Crown, eighteen more than in 1937.

21. Table VI contains crude, uncorrected death-rates calculated according to the methods already described :—

Table VI.

	1937						1938					
	Method						Method					
	A		B		C		A		B		C	
	Pop'n.	Rate	Pop'n.	Rate	Pop'n.	Rate	Pop'n.	Rate	Pop'n.	Rate	Pop'n.	Rate
Whole Population ...	1,075,040	32.2	1,075,040	32.2	1,067,959	31.4	1,096,571	35.4	1,275,040	30.5	1,093,241	35.5
Chinese	1,052,813	32.6	1,052,813	32.6	1,043,717	32.9	1,073,888	35.9	1,248,678	30.9	1,069,942	36.1
Non-Chinese ...	22.227	10.98	22,227	10.98	24,242	10.1	22.683	8.7	26.362	7.5	23.299	8.5

---

* Deaths among the Forces of the Crown are not included in this table.

4. *Still-births.*

22. In 1937 there were 913 still-births reported as compared with 1,075 in 1938. The ratios of still-births per hundred live births were 2.83 and 2.86 for 1937 and 1938 respectively.

5. *Infant mortality-rate.*

23. The number of infants dying under one year of age per thousand born amounted to 42 for non-Chinese as compared with 46 in 1937. The corresponding figures for Chinese infants were 343 and 376 for 1938 and 1937 respectively. Table VII gives the rates during the past five years.

Table VII.

Year	1934	1935	1936	1937	1938
Non-Chinese ..	50	57	37	46	42
Chinese	347	316	372	376	343

6. *Deaths according to age and sex.*

24. The system of compilation of death returns was changed in 1938 in order to make it possible to indicate the differential mortality according to age and sex.

Table VIII.

	Under 24 hours	24 hours to 1 year	1-5 years	5-15 years	15-25 years	25-45 years	45-65 years	65 years & over	Unknown
Males	32	6,025	3,237	1,245	1,920	4,355	3,487	1,600	15
Females	45	5,922	2,599	1,176	1,266	2,574	1,843	1,441	8
Sex unknown ..									28
Persons*	77	11,947	5,836	2,421	3,186	6,929	5,330	3,041	51

25. From Table VIII it will be seen that deaths in males out-numbered those in females in the ratio of 130 to 100. In twenty-eight cases it was not possible to ascertain either age or sex of the deceased. As might be expected from the high infant mortality-rate, deaths in infants under one year of age formed a very high proportion (33.8 per centum) of the total deaths, and those under five years constituted over 46 per centum of the total number of deaths at all ages.

7. *Seasonal incidence.*

26. The monthly total of deaths is tabulated below with the corresponding numbers for 1937 for purposes of comparison. In 1937 the highest number of deaths were recorded in September and resulted in part from the typhoon and in part from a continuation of the cholera epidemic. In 1938, on the other hand, the heaviest mortality fell in March at the height of the smallpox epidemic, the second peak occurring in December when large numbers of refugees crossing the border brought smallpox with them and the increased congestion led to a disquieting outbreak of cerebro-spinal meningitis.

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* Twenty-nine deaths among the Forces of the Crown are not included in this table.

Table IX.

Month	Number of deaths	
	1937	1938
January	2,477	3,291
February	2,150	3,652
March	2,230	4,114
April	2,098	3,478
May	2,360	2,961
June	2,506	3,292
July	2,623	3,110
August	3,506	2,983
September	4,070	2,640
October	3,684	2,517
November	3,460	3,047
December	3,471	3,733
Total	34,635*	38,818*

8. *Nationality—other than Chinese.*

27. The distribution of deaths according to nationality—other than Chinese—is given as follows:—

Table X.

CIVILIAN NON-CHINESE DEATHS REGISTERED DURING 1938.

American	8
British	64
Cubanese	1
Danish	2
Dutch	1
Eurasian	2
Filipino	6
French	2
German	2
Greek	1
Indian	45
Italian	2
Japanese	6
Jewish	1
Malayan	2
Portuguese	46
Russian	3
Swedish	1
Swiss	2
Total	197

---

* Deaths among the Forces of the Crown are not included in this table.

9. Causes of death.

28. The mortality returns were based upon the International List of Causes of Death, 1931, instead of on the older list of 1926.

(a) DISEASES OF THE RESPIRATORY SYSTEM (NON-TUBERCULOUS).

Respiratory diseases—excluding pulmonary tuberculosis—were again responsible in 1938 for the largest individual proportion of deaths.

Deaths from bronchitis, broncho-pneumonia and pneumonia, etc., numbered 12,057 as compared with 10,380 in 1937.

The ratio of deaths from this group to deaths from all causes also rose from 300 to 311 per 1,000.

(b) TUBERCULOSIS.

Tuberculosis attained second place on the list of deaths in 1938 with 4,920 deaths against 4,028 in 1937. The large majority of these were due to the pulmonary form. The ratio to deaths from all causes rose from 116 to 127 per thousand.

29. As may be seen from Table XI almost one third of these deaths were recorded as taking place in the age period 25 to 45 years corresponding to the more productive time of life.

Table XI.

DEATHS FROM TUBERCULOSIS (ALL FORMS), 1938.

Age group	No. of deaths.			Percentage of deaths from tuberculosis at different age periods (approximate)
	Males	Females	Total	
Under 24 hours	—	—	—	
24 hours to 1 year	136	164	300	6
1 to 5 years	390	333	723	15
5 to 15 years	288	223	511	10
15 to 25 years	367	280	647	13
25 to 45 years	969	639	1,608	33
45 to 65 years	655	296	951	19
65 years and over	96	84	180	4
Unknown age	—	—	—	
Total	2,901	2,019	4,920	

(c) ENTERITIS.

30. Third in order of importance came enteritis. Some 2,055 deaths were recorded in children under one year of age from this cause as compared with 2,365 in the previous year; while 1,801 deaths took place in persons at ages over one year (2,120 in 1937) making totals of 3,856 and 4,485 for 1938 and 1937 respectively.

(d) INFECTIOUS DISEASES—OTHER THAN TUBERCULOSIS.

31. Mention has been made elsewhere in this Report of the serious outbreaks of cholera, cerebro-spinal meningitis and smallpox in 1938 which three diseases alone accounted for 363, 223 and 1,937 deaths respectively.

32. Deaths from other infectious diseases in order of numerical importance included:—557 influenza, 340 dysentery, 314 syphilis, 187 typhoid fever, 155 measles, 147 diphtheria, seventy-six tetanus (sixty-eight from tetanus neonatorum), twenty-three leprosy, five whooping cough, two encephalitis lethargica and two erysipelas.

33. It should be noted that the majority of the cases of influenza were recorded at the Chinese hospitals where most cases were not seen until after death and where local prejudice has (so far) made it impossible for post-mortem dissections to be performed. The value of such figures for statistical purposes is practically "nil" and this provides the answer for the absence of rates per thousand living population in the different disease groups. As an example of age—sex distribution, Table XII is given below relating to deaths from smallpox. It will be noted that nearly three quarters of the deaths were in children under five years of age:—

Table XII.

DEATHS FROM SMALLPOX, 1938.

Age group	No. of deaths			Percentage of deaths from smallpox at different age periods (approximate)
	Males	Females	Total	
Under 24 hours	—	—	—	
24 hours to 1 year	286	339	625	34
1 to 5 years	366	361	727	40
5 to 15 years	77	66	143	8
15 to 25 years	90	58	148	8
25 to 45 years	77	102	179	10
45 to 65 years	1	9	10	0.6
65 years and over	1	—	1	0.05
Unknown age	—	—	—	
Total	898	935	1,833	

(e) BERI BERI, ETC.

34. Fifth on the list comes deaths due to beri beri to which were attributed 2,673 deaths in 1938 as compared with 1,661 in the previous year.

35. Apart from one death certified as being due to rickets, there were no others from deficiency diseases.

36. There is little doubt that a considerable proportion of deaths from other causes, *e.g.*, enteritis, are really attributable, directly or indirectly, to malnutrition in its various forms.

37. It is a matter of considerable regret that beri beri (which should be so easily preventible) should loom so large in the list of fatal diseases in these territories.

(f) VIOLENCE AND OTHER EXTERNAL CAUSES.

38. The number of deaths due to violence and other external causes showed a decline from 864 in 1937 (the typhoon of September being responsible for a large proportion) to 512 in 1938.

39. Of those recorded in 1938, 115 were due to drowning of which 107 were accidental. This figure may appear to be rather high, but it should be remembered that the maritime population numbers at least 100,000 and that very large numbers of persons travel daily to and from Hong Kong and Kowloon in sampans and similar craft easily capsized by squalls of wind which are not uncommon.

40. Seventy-four suicides were registered, poisoning, hanging and precipitation from the upper storeys of buildings being the commoner methods employed. Seventeen deaths were the result of Japanese military operations on the border and two additional deaths followed wounds received in the conflict.

(g) MALIGNANT DISEASE.

41. Deaths from cancer are much less common in these territories than in European countries. 269 deaths were registered of which 255 were in respect of women. Cancer of the alimentary system is more frequently met with in men than women in whom cancer of the uterus holds first place as a cause of death from malignant disease.

(h) DISEASES OF PREGNANCY.

42. The number of deaths registered as being due to accidents and diseases of pregnancy and parturition in 1938 remained at the same figure as in the previous year, namely, seventy-six.

43. This is remarkable and would be a little dificult to believe were not confirmatory statistics available from the institutions catering for women in childbirth.

44. The actual puerperal mortality-rate per thousand live births is estimated at 2.1 which compares more than favourably with similar rates in most other countries.*

45. This statement should be taken in conjunction with the remarks under the certification of causes of death.

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* Note :—2.97 for England and Wales in 1938.

DEATH CERTIFICATION.

46. In a very large number of deaths which take place in Hong Kong the deceased has not been attended by a Western-medicine practitioner.

47. Reference has already been made to the opposition to post-mortem dissections on bodies of persons who have died at the Chinese hospitals or have been brought in dead into this group of hospitals—nearly 10 per centum of all registered deaths. Added to this, the numbers of post-mortems to be carried out in the two main public mortuaries in Victoria and Kowloon are so great—amounting to over sixty a day on occasion and forming over 25 per centum of all registered deaths—that the staff available cannot possibly carry out detailed dissections except in cases of medico-legal importance.

48. It follows, therefore, that it would be unwise to attach too much importance to the actual figures for individual causes of death and that these should be regarded as indicating only approximately the incidence of fatal disease.

49. Further particulars are contained in the following Tables XIII and XIV :—

Table XIII.

Authority certifying cause of death	Chinese		Non-Chinese	
	Number of cases	Percentage of all cases	Number of cases	Percentage of all cases
Medical practitioners in attendance	21,257	55.04	175	88.83
Medical Officer of Health	2	0.01		
Tung Wah Hospital	1,155	2.99		
Tung Wah Eastern Hospital.	670	1.74		
Kwong Wah Hospital	1,960	5.07		
Coroner from information received from the Medical Officers *i/c.* Public Mortuaries	10,897	28.22	22	11.17
Asst. Registrars, New Territories	2,680	6.93		
Total	38,621	—	197	—

Table XIV.

International List of Causes of Death, 1931	I.—INFECTIOUS AND PARASITIC DISEASES	Deaths		
		Males	Females	Persons
1	Typhoid fever	115	72	187
6	Smallpox	898	935	1,833
7	Measles	84	71	155
9	Whooping cough	3	2	5
10	Diphtheria	76	71	147
11	Influenza	365	192	557
12	Cholera	245	118	363
13	Dysentery :—			
(a)	Amœbic	14	11	25
(b)	Bacillary	240	52	292
(c)	Other or unspecified	14	9	23
15	Erysipelas	—	2	2
17	Encephalitis lethargica	1	1	2
18	Cerebro-spinal meningitis	139	84	223
22	Tetanus	22	54	76
23	Tuberculosis of the respiratory system	2,354	1,566	3,920
24	Tuberculosis of the central nervous system	199	172	371
25	Tuberculosis of intestines and peritoneum	27	16	43
26	Tuberculosis of vertebral column	2	—	2
27	Tuberculosis of other bones and joints	20	8	28
28	Tuberculosis of skin and subcutaneous tissues	—	1	1
29	Tuberculosis of lymphatic system (abdominal and bronchial glands excepted)	3	4	7
	Carried forward	4,821	3,441	8,262

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	I.—INFECTIOUS AND PARASITIC DISEASES	Deaths		
		Males	Females	Persons
	Brought forward	4,821	3,441	8,262
31	Tuberculosis of other organs :—			
	Adrenals	1	—	1
	Other sites included under 31	4	—	4
32	Disseminated tuberculosis :—			
(a)	Acute	6	10	16
(b)	Chronic	2	1	3
(c)	Not distinguished as acute or chronic .	283	239	522
33	Leprosy	18	5	23
34	Syphilis :—			
(a)	Congenital syphilis	87	135	222
(b, c)	Syphilis acquired or unspecified	61	31	92
36	Purulent infection, septicæmia :—			
(a)	Septicæmia	18	6	24
(b)	Pyæmia	2	2	4
(c)	Gas gangrene	1	—	1
38	Malaria :—			
	Benign tertian	2	2	4
	Cachexia	9	5	14
	Malignant tertian	183	91	294
	Quartan	1	—	1
	Type not specified	274	146	420
40	Ankylostomiasis	—	1	1
42	Other diseases due to helminths	2	2	4
44	Other infectious or parasitic diseases :—			
	Varicella	2	2	4
	Mumps	1	—	1
	Carried forward	5,778	4,119	9,917

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	II.—CANCER AND OTHER TUMOURS	Deaths		
		Males	Females	Persons
	Brought forward	5,778	4,119	9,917
45	Cancer of the buccal cavity and pharynx.	11	5	16
46	Cancer of the digestive organs and peritoneum	63	46	109
47	Cancer of the respiratory organs	16	7	23
48	Cancer of the uterus	—	49	49
49	Cancer of other female genital organs ...	—	12	12
50	Cancer of the breast	2	22	24
51	Cancer of the male genito-urinary organs	7	—	7
52	Cancer of the skin	4	2	6
53	Cancer of other or unspecified organs ...	11	12	23
54	Non-malignant tumours :—			
(a)	Female genital organs	—	4	4
(b)	Other sites	—	1	1
55	Tumours of undetermined nature :—			
(a)	Female genital organs	—	1	1
(b)	Other sites	6	—	6
	III.—RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES			
56	Rheumatic fever	4	5	9
57	Chronic rheumatism, osteo-arthritis :—			
	Chronic rheumatism	2	1	3
	Rheumatoid arthritis, osteo-arthritis ...	1	1	2
59	Diabetes	17	4	21
61	Beri-beri	2,004	669	2,673
63	Rickets	—	1	1
	Carried forward	7,926	4,961	12,907

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	III.—RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES	Deaths		
		Males	Females	Persons
	Brought forward	7,926	4,961	12,907
	Other general diseases :—			
69	Amyloid disease of unstated origin ...	18	15	33
	IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS			
70	Hæmorrhagic conditions :—			
(a)	Purpura	4	3	7
71	Anæmia, chlorosis :—			
(a)	Pernicious anæmia	1	3	4
(b)	Other anæmias and chlorosis	—	3	3
	Splenic anæmia	1	—	1
	Other diseases included under 71	1	3	4
72	Leukæmia, aleukæmia :—			
(a)	Leukæmia	1	3	4
(b)	Aleukæmia (lymphadenoma)	2	—	2
73	Diseases of the spleen :—			
	Banti's disease	1	—	1
	Other diseases of the spleen	6	2	8
	V.—CHRONIC POISONING			
76	Chronic poisoning by other organic substances :—			
	Opium habit	7	1	8
	Morphine habit	1	—	1
	VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS			
78	Encephalitis :—			
(a)	Cerebral abscess	3	—	3
(b)	Other diseases included under 78	7	1	8
79	Meningitis (other than cerebro-spinal meningitis)	45	45	90
	Carried forward	8,024	5,040	13,084

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	Deaths		
		Males	Females	Persons
	Brought forward	8,024	5,040	13,084
80	Tabes dorsalis	2	—	2
81	Other diseases of the spinal cord :— Progressive muscular atrophy	1	—	1
	Myelitis of unstated origin	1	1	2
	Other diseases included under 81	1	—	1
82 (a)	Cerebral hæmorrhage, apoplexy, etc :— Cerebral hæmorrhage	196	116	312
(b)	Cerebral embolism and thrombosis	10	11	21
(c)	Hemiplegia and other paralysis of unstated origin	24	24	48
83	General paralysis of the insane	2	2	4
84	Other forms of insanity :—			
(b)	Other conditions included under 84	1	—	1
85	Epilepsy	9	8	17
86	Infantile convulsions (under 5 years of age)	2	1	3
87	Other diseases of the nervous system :—			
(b)	Neuritis, neuralgia	15	16	31
(c)	Paralysis agitans	1	—	1
(e)	Other diseases included under 87	6	3	9
88	Diseases of the eye and annexa	1	—	1
89	Diseases of the ear and of the mastoid sinus	3	3	6
	VII.—DISEASES OF THE CIRCULATORY SYSTEM			
90	Pericarditis	12	6	18
91	Acute endocarditis :— Malignant endocarditis	6	5	11
	Other acute endocarditis	3	4	7
	Carried forward	8,320	5,240	13,580

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	VII.—DISEASES OF THE CIRCULATORY SYSTEM	Deaths		
		Males	Females	Persons
	Brought forward	8,320	5,240	13,580
92	Chronic endocarditis, valvular disease :—			
	Aortic valve disease	22	8	30
	Mitral valve disease	65	58	123
	Aortic and mitral valve disease	50	26	76
	Endocarditis not returned as acute or chronic	26	20	46
	Other or unspecified valve disease	8	10	18
93	Diseases of the myocardium :—			
(b)	Myocardial degeneration	52	34	86
(c)	Myocarditis not distinguished as acute or chronic	260	155	415
94	Diseases of the coronary arteries, angina pectoris	4	3	7
95	Other diseases of the heart :—			
(a)	Disordered action of heart	12	8	20
	Dilatation of heart (cause unspecified).	10	12	22
	Heart disease (undefined)	9	8	17
96	Aneurysm	11	2	13
97	Arterio-sclerosis	23	13	36
98	Gangrene	15	21	36
99	Other diseases of the arteries	16	1	17
100	Diseases of the veins (varix, hæmorrhoids, phlebitis etc.) :—			
	Varix :—			
	Hæmorrhoids	1	—	1
101	Diseases of the lymphatic system (lymphangitis, etc.)	—	1	1
102	Abnormalities of blood pressure :—			
	Other diseases included under 102	2	1	3
103	Other diseases of the circulatory system..	1	—	1
	Carried forward	8,907	5,621	14,548

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	VIII.—DISEASES OF THE RESPIRATORY SYSTEM	Deaths		
		Males	Females	Persons
	Brought forward	8,907	5,621	14,548
105	Diseases of the larynx :—			
	Laryngitis	—	1	1
	Other diseases of the larynx	2	1	3
106	Bronchitis :—			
(a)	Acute bronchitis	996	946	1,942
(b)	Chronic bronchitis	524	436	960
(c)	Bronchitis not distinguished as acute or chronic	300	299	599
107	Broncho-pneumonia	3,621	3,418	7,039
108	Lobar pneumonia	566	412	978
109	Pneumonia (not otherwise defined)	247	153	400
110	Pleurisy :—			
	Empyema	64	55	119
	Other pleurisy	15	5	20
111	Congestion and hæmorrhagic infarct of lung, etc. :—			
	1. Hypostatic congestion of lungs	3	3	6
112	Asthma	22	9	31
113	Pulmonary emphysema	1	1	2
114	Other diseases of the respiratory system :—			
(b)	Other diseases included under 114 :—			
	Gangrene of the lung	4	1	5
	Other diseases included under 114b.	5	1	6
115	Diseases of the buccal cavity, pharynx, etc. :—			
	Diseases of the teeth and gums	11	3	14
	Ludwig's angina	2	2	4
	Diseases of the tonsils	4	3	7
	Other diseases included under 115	10	2	12
	Carried forward	15,304	11,372	26,696

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	IX.—DISEASES OF THE DIGESTIVE SYSTEM	Deaths		
		Males	Females	Persons
	Brought forward	15,304	11,372	26,696
117	Ulcer of the stomach or duodenum :—			
(a)	Ulcer of the stomach	35	12	47
(b)	Ulcer of the duodenum	3	3	6
118	Other diseases of the stomach :—			
	Inflammation of the stomach	51	27	78
	Other diseases included under 118	9	4	13
119 & 120	Diarrhœa and enteritis :—			
	Under one year	1,043	1,012	2,055
	Over one year	1,124	677	1,801
121	Appendicitis	28	15	43
122	Hernia, intestinal obstruction :—			
(a)	Hernia	8	—	8
(b)	Intestinal obstruction	19	12	31
123	Other diseases of the intestines :—			
	Constipation, intestinal stasis	—	1	1
	Other diseases included under 123	2	1	3
124	Cirrhosis of the liver :—			
(a)	Returned as alcoholic	32	8	40
(b)	Not returned as alcoholic	42	5	47
125	Other diseases of the liver :—			
	Acute yellow atrophy	2	—	2
	Other diseases included under 125	13	24	37
127	Other diseases of the gall bladder and ducts	12	5	17
128	Diseases of the pancreas	1	1	2
129	Peritonitis without stated cause	24	22	46
	Carried forward	17,752	13,201	30,973

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	X.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA	Deaths		
		Males	Females	Persons
	Brought forward	17,752	13,201	30,973
130	Acute nephritis	110	72	182
131	Chronic nephritis	242	169	411
132	Nephritis not stated to be acute or chronic	264	172	436
133	Other diseases of the kidney and annexa :—			
(a)	Pyelitis	13	4	17
135	Diseases of the bladder :—			
(a)	Cystitis	6	2	8
(b)	Other diseases of the bladder	1	1	2
136	Diseases of the urethra, urinary abscess, etc. :—			
(a)	Stricture of the urethra	3	—	3
(b)	Other diseases of the urethra, etc.	1	—	1
138	Diseases of the male genital organs	2	—	2
139	Diseases of the female genital organs :—			
(a)	Diseases of the ovary	—	1	1
	Diseases of the fallopian tube	—	3	3
(c)	Diseases of the breast	—	1	1
	XI.—DISEASES OF PREGNANCY, CHILD BIRTH AND THE PUERPERAL STATE			
141	Abortion not returned as septic :—			
	Hæmorrhage following abortion	—	1	1
	Without record of hæmorrhage	—	1	1
142	Ectopic gestation	—	9	9
143	Other accidents of pregnancy	—	1	1
144	Puerperal hæmorrhage :—			
(a)	Placenta prævia	—	5	5
(b)	Other puerperal hæmorrhage	—	21	21
	Carried forward	18,394	13,664	32,078

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	XI.—DISEASES OF PREGNANCY, CHILD-BIRTH AND THE PUERPERAL STATE	Deaths		
		Males	Females	Persons
	Brought forward	18,394	13,664	32,078
145	Puerperal sepsis :—			
(a)	Puerperal septicæmia and pyæmia	—	6	6
146	Puerperal albuminuria and convulsions :—			
	Puerperal convulsions	—	11	11
	Other conditions included under 146 ..	—	5	5
147	Other toxæmias of pregnancy	—	8	8
148	Puerperal phlegmasia alba dolens, embolism, and sudden death :—			
(a)	Puerperal phlegmasia alba dolens not returned as septic	—	3	3
149	Other accidents of child-birth	—	5	5
	XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE			
151	Carbuncle, boil	11	7	18
152	Cellulitis, acute abscess :—			
	Cellulitis	32	17	49
	Acute abscess	22	17	39
153	Other diseases of the skin and its annexa.	5	1	6
	XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION			
154	Acute infective osteo-myelitis and periostitis	1	1	2
155	Other diseases of the bones	3	—	3
156	Diseases of the joints and other organs of locomotion :—			
(a)	Diseases of the joints	7	—	7
	Carried forward	18,475	13,745	32,240

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	XIV.—CONGENITAL MALFORMATIONS	Deaths Males	 Females	 Persons
	Brought forward	18,475	13,745	32,240
157	Congenital malformations :—			
(a)	Congenital hydrocephalus	10	3	13
(c)	Congenital malformation of heart	5	—	5
(d)	Monstrosities	—	1	1
(e)	Other congenital malformations	6	1	7
	XV.—DISEASES OF EARLY INFANCY			
158	Congenital debility	495	506	1,001
159	Premature birth	300	320	620
160	Injury at birth	2	1	3
161	Other diseases peculiar to early infancy :—			
	(Infants under 3 months of age only)			
(a)	Atelectasis	26	25	51
(b)	Icterus neonatorum	60	88	148
(c)	Other diseases included under 161	2	6	8
	XVI.—OLD AGE			
162	Old age :—			
(a)	Senile dementia	8	9	17
(b)	Other forms of senile decay	565	608	1,173
	XVII.—DEATHS FROM VIOLENCE			
163	Suicide by solid or liquid poisons and corrosive substances	12	17	29
165	Suicide by hanging or strangulation	21	2	23
166	Suicide by drowning	2	6	8
167	Suicide by firearms	1	1	2
168	Suicide by cutting or piercing instruments	2	—	2
169	Suicide by jumping from high places	7	3	10
173	Homicide by firearms	4	—	4
	Carried forward	20,003	15,342	35,365

Table XIV,—*(Contd.)*.

International List of Causes of Death, 1931	XVII.—Deaths from violence	Deaths		
		Males	Females	Persons
	Brought forward	20,003	15,342	35,365
174	Homicide by cutting or piercing instruments	4	1	5
175	Homicide by other means	1	—	1
178	Accidental absorption of irrespirable or poisonous gas	1	1	2
179	Other acute accidental poisoning (not by gas)	4	—	4
180	Conflagration	2	10	12
181	Accidental burns (conflagration excepted)	12	4	16
182	Accidental mechanical suffocation	3	4	7
183	Accidental drowning	61	46	107
184	Accidental injury by firearms	3	—	3
185	Accidental injury by cutting or piercing instruments	3	—	3
186	Accidental injury by fall, crushing, etc. .	129	53	182
189	Hunger or thirst	1	—	1
193	Electricity (lightning excepted)	—	1	1
194	Other and unstated forms of accidental violence :—			
	Other causes included under 194	2	—	2
195	Violent deaths of unstated nature (*i.e.* accidental, suicidal, etc.)	48	17	65
196	Wounds of war	2	—	2
197	Execution of civilians by belligerent armies	12	5	17
198	Execution	4	—	4
	XVIII.—Ill-defined diseases			
199	Sudden death	—	1	1
200	Cause of death unstated or ill-defined :—			
	Heart failure	1	1	2
	Other ill-defined causes	1,537	1,350	2,887
	Cause not specified	83	38	121
	Sex unknown	—	—	28
	Total*	21,916	16,874	38,838

* 29 deaths among the Forces of the Crown are not included in this table.

P. S. Selwyn-Clarke
Registrar-General of Births and Deaths.